

# **ORDINANCE**

## **STORM WATER MANAGEMENT AND EROSION CONTROL ORDINANCE**

**Effective: June 2, 2009**

Approved: October 1, 2008

The Council of the City of Amery does ordain as follows:

### **TABLE OF CONTENTS**

|   |       |
|---|-------|
| <b>Sec. 1 Authority for Ordinance</b>                                 | ..... |
| <b>Sec. 2 General Administration</b>                                  | ..... |
| <b>Sec. 3 Findings</b>  | ..... |
| <b>Sec. 4 Purpose and Intent</b>                                      | ..... |
| (a) Purpose   | ..... |
| (b) Intent  | ..... |
| <b>Sec. 5 Jurisdiction</b>  | ..... |
| (a) Jurisdictional Boundaries   | ..... |
| (b) Newly Annexed Areas   | ..... |
| <b>Sec. 6 Exemptions and Applicability</b>                            | ..... |
| (a) Exemptions  | ..... |
| (b) Applicability   | ..... |
| (c) Construction Site Erosion Control                                 | ..... |
| (d) Storm Water Management  | ..... |
| <b>Sec. 7 Storm Water Permit Processes, Land Divisions and Zoning</b> | ..... |
| (a) Permit Required   | ..... |
| (b) Preliminary Storm Water Review Letter                             | ..... |
| (c) Storm Water Permit Application                                    | ..... |
| (d) Certification of Compliance for Final Plat and CSM                | ..... |
| (e) Fees  | ..... |
| (f) Application Review Processes                                      | ..... |
| <b>Sec. 8 Storm Water Permit Requirements</b>                         | ..... |
| (a) General Permit Requirements                                       | ..... |
| (b) Permit Issuance, Duration, Amendments, Transfer and Termination   | ..... |
| (c) Financial Assurance   | ..... |
| (d) Construction and Planting Verification                            | ..... |
| (e) Final Inspection  | ..... |
| <b>Sec. 9 Plan Requirements – Construction Site Erosion Control</b>   | ..... |
| (a) General Erosion Control Requirements and Performance Standards    | ..... |
| (b) Guiding Principles for Erosion Control                            | ..... |
| (c) Specific Erosion Control Plan Requirements                        | ..... |
| (d) Preliminary Erosion Control Plan Contents                         | ..... |
| (e) Final Erosion Control Plan Contents                               | ..... |

**Sec. 10 Plan Requirements – Storm Water Management**

- (a) General Storm Water Management Plan Requirements.....
- (b) Guiding Principles for Storm Water Management.....
- (c) Site Plan Map Requirements .....
- (d) Specific Storm Water Mgt. Requirements and Performance Standards.....
- (e) Technical Exemptions .....
- (f) Preliminary Storm Water Management Plan Requirements.....
- (g) Final Storm Water Management Plan Requirements.....

**Sec. 11 Technical Standards and Specifications**

- (a) Hydrologic and Hydraulic Computations.....
- (b) Best Management Practice Design Standards.....
- (c) Technical Guidelines.....
- (d) Construction Specifications .....
- (e) Soil Evaluations .....
- (f) Availability .....
- (g) Future Revisions and Updates.....

**Sec. 12 Maintenance of Storm Water BMPs**

- (a) Maintenance Agreement Required.....
- (b) Agreement Provisions.....
- (c) Agreement Form, Approval and Recording.....
- (d) Maintenance Responsibilities Prior to a Maintenance Agreement.....

**Sec. 13 Illicit Discharges**

- (a) Prohibitions .....
- (b) Exemptions .....
- (c) Notice of violation .....

**Sec. 14 Enforcement**

- (a) Prohibited Practices.....
- (b) Violations .....
- (c) Appeals.....

**Sec. 15 Validity**

- (a) Repeal of Conflicting Ordinances .....
- (b) Declaration of Severability .....

**Sec. 16 Definitions .....**

**Appendix X - Rain Garden Design .....**

**Effective Date .....**

**Adoption .....**

## **Sec. 1. Authority for Ordinance**

This ordinance is adopted by the Amery City Council under the authority granted by Sections 59.693 and 92.07(15) and Chapter 236 Wisconsin Statutes

## **Sec. 2. General Administration**

A Designated City Representative shall administer this ordinance, a Designated City Representative is responsible for the review of applications and associated documentation, and a Designated City Representative is responsible for enforcement this ordinance. The Designated City Representative(s) shall be appointed by a majority vote of the Amery City Council.

## **Sec. 3. Findings**

Uncontrolled storm water runoff and construction site erosion from land development and land disturbing activity can have significant adverse impacts upon local surface and ground water resources and the health, safety and general welfare of the community, and diminish the public enjoyment and use of natural resources within Amery. Specifically, uncontrolled soil erosion and storm water runoff can:

1. Degrade stream habitat by increasing stream bank erosion, increasing stream bed scour, diminishing groundwater recharge, diminishing stream base flows and increasing stream temperatures;
2. Reduce the capacity of lakes and streams to support fish, aquatic life, recreational and water supply uses by increasing pollutant loadings of sediment, suspended solids, nutrients, heavy metals, bacteria, pathogens and other urban pollutants;
3. Alter wetland communities by changing wetland hydrology and increasing pollutant loads;
4. Reduce the quality of groundwater by increasing pollutant loading;
5. Threaten public health, safety, property, and general welfare by increasing runoff volumes and peak flood flows and overburdening storm sewers, drainage ways and other storm drainage systems;
6. Undermine floodplain management efforts by increasing the incidence and levels of flooding; and
7. Generate airborne particulate concentrations that are health threatening or may cause other damage to property or the environment.

## **Sec. 4. Purpose and Intent**

**(a) Purpose.** The general purpose of this ordinance is to establish regulatory requirements for land development and land disturbing activities aimed to minimize the threats to public health, safety, welfare, and the natural resources of Amery from construction site erosion and post-construction storm water runoff.

Specific purposes are to:

1. Further the maintenance of safe and healthful conditions.
2. Prevent and control the adverse effects of storm water; prevent and control soil erosion; prevent and control water pollution; protect

- spawning grounds, fish and aquatic life; establish erosion control and storm water standards for building sites, placement of structures and land uses; and preserve ground cover and scenic beauty.
3. Control exceedance of the safe capacity of existing drainage facilities and receiving water bodies; prevent undue channel erosion; control increases in the scouring and transportation of particulate matter; and prevent conditions that endanger property.

**(b) Intent.** This ordinance is intended to meet the current construction site erosion control and post-construction storm water management regulatory requirements of Subchapter III of both NR 151 and NR 216 Wis. Admin. Code. and further protect the water resources of the City of Amery. .

Note: If the Designated City Representative should become an "Authorized Local Program" under the provisions of NR 216.415, a permit application under this ordinance is intended to satisfy the "Notice of Intent" requirements under NR 216.43.

## **Sec. 5. Jurisdiction**

**(a) Jurisdictional Boundaries.** This ordinance applies to all incorporated lands within the jurisdictional boundaries of the City of Amery.

Note: The standards in this ordinance meet the DNR minimum standards noted above on the effective date of this ordinance. This ordinance may be administered through intergovernmental agreements under s. 66.0301 Wisconsin Statutes.

## **Sec. 6. Exemptions and Applicability**

### **(a) Exemptions.**

1. Exempt From All Requirements. The following activities shall be exempt from all of the requirements of this ordinance:
  - A. Land disturbing activities directly involved in the planting, growing and harvesting of any plant grown for human or livestock consumption and pasturing or yarding of livestock, including sod farms and tree nurseries.
  - B. Land development and land disturbing activities exempted by state or federal law, including highway construction and other projects conducted by a state agency, as defined under s. 227.01 (1), Wisconsin Statutes, or under a memorandum of understanding entered into under s. 281.33 (2), Wisconsin Statutes. To recognize an exemption under this paragraph, the Designated City Representative may require documentation of the person(s) and regulatory agency charged with enforcing erosion control and storm water management for the project.
  - C. Land disturbing activity directly involved in the installation and maintenance of private on-site waste disposal systems, regulated under County ordinance.

Note: Cooperative working agreements may be used to administer this section for routine road maintenance and emergency utility work.

### **(b) Applicability.**

1. Construction Site Erosion Control (Land Disturbing Activities). A storm water permit under Sec. 7 shall be required and all provisions of this ordinance shall apply to all proposed land disturbing activity that meets any of the following:
  - A. Disturbs a total land surface area of 3,000 square feet or more; or
  - B. Involves excavation and/or filling, in excess of 400 cubic yards of material; or
  - C. Involves the disturbance of road ditch, grass swale, other open channel for a distance of 300 feet or more; or
  - D. Is a land disturbing activity, of any size, that the Designated City Representative determines may cause an adverse impact to an environmentally sensitive area or other property, may violate any other erosion control standard set forth in this ordinance, or deemed to be under the intent of this ordinance.
2. Storm Water Management (Land Developing Activities). A storm water permit under Sec. 7 shall be required and all provisions of this ordinance shall apply to all proposed land development activity that meet any of the following:
  - A. Is a subdivision plat; or
  - B. Is a certified survey map or any other land development activity that may ultimately result in the addition of 0.5 acres or greater of impervious surfaces, including smaller individual sites that are part of a common plan of development that may be constructed at different times; or
  - C. Involves the construction of any new public or private road; or
  - D. Is a land development activity, regardless of size, that the Designated City Representative determines may cause an adverse impact to an environmentally sensitive area or other property. For purposes of this section, adverse impacts shall include causing chronic wetness on other property due to reoccurring discharges of storm water, violating any other storm water management standard set forth in this ordinance, or deemed to be under the intent of this ordinance.

Note: Cooperative working agreements may be used to administer this section for routine road maintenance and emergency utility work.

## **Sec. 7. Storm Water Permit Process**

**(a) Permit Required.** A storm water permit under sub. (c) shall be obtained before any person commences a land disturbing or land development activity, pursuant to Sec. 6. Based upon the scope of the project, a Preliminary Review Letter under sub. (b) below and certification of compliance under sub. (d) below are required as part of the permit process.

### **b) Preliminary Storm Water Review Letter.**

1. Purpose and Intent. A preliminary storm water review letter is prepared by the Designated City Representative to ensure that early site-planning for any new development accounts for compliance with this

ordinance. Preliminary storm water planning will help resolve spatial and soils issues early in the site-planning phase and may prevent a conflict with other permit requirements. A storm water permit is required prior to the start of any proposed land disturbing or land development activity.

2. Applicability and Requirements.

- A. A preliminary storm water review letter from the Designated City Representative is required prior to the approval of a preliminary plat, a certified survey map, site plan, conditional use permit, zoning permit or zoning amendment where any proposed land disturbing or land development activity are proposed to occur under Sec. 6.
- B. All project described in sub. A. above shall be subject to conditional approvals subject to the recommendations, requirements or objections contained in a preliminary review letter from the Designated City Representative, which will require certification of compliance under sub. (d) and the application review process under sub. (f) below, unless not applicable.

Note: It is recommended that subdivisions and other projects that may result in the addition of 0.5 acres of impervious surface go through a concept-planning phase, including meeting with Designated City Representative and other appropriate City staff, prior to submitting a preliminary plat or CSM.

3. Preliminary Review Letter Application.

- A. To request a preliminary review letter, the applicant shall submit a complete application to the Designated City Representative, which shall include all of the following:
  - (i) A completed and signed application on a form provided by the Designated City Representative for that purpose;
  - (ii) The application fee, unless exempted under sub. (e) below;
  - (iii) A site plan map in accordance with Sec. 10(c), which may be in a preliminary stage as prepared for zoning amendments and certified survey maps;
  - (iv) A preliminary erosion control plan in accordance with Sec. 9(d);
  - (v) A preliminary storm water management plan in accordance with Sec. 10(f);
  - (vi) A preliminary maintenance agreement for all storm water BMP's proposed for the site.
- B. The Designated City Representative may waive the requirement for a preliminary erosion control or preliminary storm water management plan under sub. A above if the Designated City Representative determines that it is not necessary to ensure compliance with this ordinance. However, all items required for a storm water permit shall apply.
- C. The Designated City Representative may require map items listed above to be submitted in a digital form, if available, including

georeferencing map data to the public land survey system in accordance with county and/or City mapping standards.

- D. Review procedures for a preliminary review letter application shall be in accordance with sub. (f)1. below.

**(c) Storm Water Permit Application.**

1. To request a storm water permit under this ordinance, the applicant shall submit a complete application, which shall include all of the following:
  - A. A completed and signed application on a form provided by the Designated City Representative for that purpose;
  - B. The applicable fee(s), unless exempted under sub. (e) below;
  - C. A site plan map in accordance with Sec. 10(c);
  - D. A final erosion control plan in accordance with Sec. 9(e);
  - E. A final storm water management plan in accordance with Sec. 10(g) for those land development activities that meet any of the applicability criteria of Sec. 6(b), and the documentation required under Sec. 10(e)2.D. related to a off-site BMP's, if applicable;
  - F. A maintenance agreement in accordance with Sec. 12; and
  - G. A financial assurance, in accordance with Sec. 8(c).
2. The Designated City Representative may require map items listed above to be submitted in a digital form, if available, including georeferencing map data to the public land survey system in accordance with county and/or City mapping standards.
3. Review procedures for a storm water permit application shall be in accordance with sub. (f) below.

**(d) Certification of Compliance for Final Plat or CSM.**

1. Applicability. The Designated City Representative shall certify compliance with this section prior to City Council approval of any final plat. In addition, certification of compliance shall be required prior to City Council approval of any certified survey map (CSM) subject Sec. 6(a)1.D.
2. Review Items. To obtain certification of compliance, the applicant shall submit a final plat or CSM to the Designated City Representative for review. The Designated City Representative shall review submittals for compliance with all of the following items based on preliminary or final site plans and storm water management plans:
  - A. Location and size of drainage easements and other areas set aside for storm water management, and the associated language describing use restrictions;
  - B. Setback requirements from wells, structures, steep slopes, road right-of-ways and other items related to the location of storm water management facilities;

- C. Location of access drives and associated easements and use restrictions to ensure adequate access to storm water management facilities for future maintenance;
  - D. Utility easements as they may affect the grading and erosion control plans;
  - E. The final maintenance agreement in accordance with Sec. 12 for all storm water BMP's; and
  - F. Other items that the Designated City Representative determines are necessary to achieve compliance with this ordinance.
3. Review Process. Review procedures for certification of compliance for final plat or CSM shall be as described in sub. (f)1. below.

Note: To avoid disapproval of the final plat, it is recommended that a final storm water management plan be approved by the Designated City Representative prior to submittal of the final plat.

**(e) Fees.** Application and review fees under this ordinance shall be in accordance with the following:

- 1. Direct application fees shall be recommended by the Designated City Representative and established by the City Council through the annual budget process.
- 2. Direct application fee amounts shall be based on the actual and direct Designated City Representative costs of administering this ordinance.
- 3. An escrow recommended by the Designated City Representative and established by the City Council through the annual budget process for application review and enforcement. Escrow will be used to cover costs associated with review and enforcement of applications and permits. If escrows are exceeded for this purpose the applicant shall pay for all costs associated with review and enforcement.
- 4. The applicant shall authorize the Designated City Representative to perform any review work, compliance work, and enforcement work, which will be paid by applicant through escrow or deposit or financial guarantee or a special assessment or charge against the property as provided under Section 66.0627 or 66.0703 Wis. Stats., to cover the cost of such work or operations. The applicant shall waive notice and hearing as provided by Section 66.0703(7)(b) Wis. Stats.
- 5. A fee and escrow schedule shall be available for review and public distribution.

**(f) Application Review Processes.**

- 1. Preliminary Storm Water Review Letter and Certification of Compliance. Upon submittal of a complete application under sub. (b) above and/or under sub. (d) above, the applicant is authorizing the Designated City Representative to enter upon the subject site to obtain information needed to administer this ordinance and the following procedures shall apply:

- A. The Designated City Representative shall have 15 working days from the date the Designated City Representative receives the application to issue a review letter to the applicable review authorities and the applicant based on the requirements of this ordinance.
  - B. If within the 15 working days, the Designated City Representative determines that the application is not complete or requests additional information from the applicant or another source (such as another regulatory agency), the Designated City Representative shall have 10 working days from the date additional information is received to issue a review letter. The Designated City Representative shall inform the applicant and the applicable review authorities when additional information is requested from another source.
  - C. If the Designated City Representative does not notify the applicant via certified mail, of missing information or issue a review letter within the 15 working days, the applicant may continue pursuing other applicable approvals or deed recording without the preliminary storm water review letter or certification of compliance.
  - D. If within the 15 working days, the Designated City Representative notifies the applicable via certified mail, review authorities that the application under sub. (b)3. above is not complete, information has been requested from another source, or recommended changes or objections to the application need to be addressed before other approvals can proceed, then the applicable review authorities may:
    - (i) At the request of the applicant, grant an extension to the review period, if needed, to allow more time for the Designated City Representative review process to be completed or to address Designated City Representative recommendations, requirements or objections to the application; or
    - (ii) Disapprove the application, plat or CSM.
2. Storm Water Permit -One-Half Acre Land Disturbance and Greater, Applicability Exemptions and Technical Exemptions. Upon submittal of a complete permit application under sub. (c) above or applicability exemption application under Sec. 6 or Sec. 10 (e), the applicant is authorizing the Designated City Representative to enter upon the subject site to obtain information needed to administer this ordinance and the following procedures shall apply:
- A. Within 20 working days from the date the Designated City Representative receives the application, the Designated City Representative shall inform the applicant whether the application materials are approved or disapproved based on the requirements of this ordinance.
  - B. If all requirements of this ordinance have been met through the application, the Designated City Representative shall approve the

application and issue a permit. If all requirements of this ordinance have not been met, the Designated City Representative shall state in writing the reasons for disapproval.

- C. If within the 20 working days, the Designated City Representative determines that the application is not complete or requests additional information from the applicant or another source (such as another regulatory agency), the Designated City Representative shall have 20 working days from the date the additional information is received to review and act on the application. The Designated City Representative shall inform the applicant when additional information is requested.
- D. Failure of the Designated City Representative to inform the applicant of missing information or of a decision within the 20 working days shall be deemed to mean approval of the application and the applicant may proceed as if a permit had been issued.

## **Sec. 8. Storm Water Permit Requirements**

**(a) General Permit Requirements.** Storm water permits shall be subject to all of the requirements of this section. Violation of any permit requirement shall cause the permit holder and any other responsible party to be subject to enforcement action under Sec. 14. Upon issuance of a storm water permit, the permit holder and any other responsible party shall be deemed to have accepted these requirements. General requirements include all of the following:

1. Other Permits. Compliance with a storm water permit does not relieve the permit holder or other responsible party of the responsibility to comply with other applicable federal, state, and local laws and regulations. The Designated City Representative may require the applicant to obtain other permits or plan approvals prior to issuing a storm water permit.
2. Approved Plans. All best management practices shall be installed and maintained in accordance with approved plans and construction schedules. A copy of the approved plans shall be kept at the construction site at all times during normal business hours.
3. Plan Modifications. The Designated City Representative shall be notified of any significant modifications proposed to be made to the approved plans. The Designated City Representative may require proposed changes to be submitted for review prior to incorporation into the approved plans or implementation. Any modifications made during plan implementation without prior approval by the project engineer under sub. 6 below and the Designated City Representative are subject to enforcement action.
4. Notification. The Designated City Representative shall be notified at least 2 working days before commencing any work in conjunction with approved plans. The Designated City Representative shall also be notified of proposed plan modifications under sub. 3 above, and within 1 working day of completing construction of a storm water BMP. The

Designated City Representative may require additional notification according to a schedule established by the Designated City Representative so that practice installations can be inspected during construction.

5. Designated City Representative Access. The Designated City Representative or its designee shall be permitted access to the site for the purpose of inspecting the property for compliance with the approved plans and other permit requirements.
6. Project Engineer/Landscape Architect/Individual. An individual permit holder involved in individual construction projects creating an additional 7000 sq. ft. or less of impervious surfaces may obtain a permit that is designed and constructed as outlined in Appendix X – Rain Garden Design. All others shall provide an Engineer/ Landscape Architect licensed in the state of Wisconsin to be responsible for achieving compliance with approved construction plans, including the implementation of the approved inspection plan and verification of construction in accordance with sub. (d) below. If warm season or wetland plantings are involved, the permit holder shall also provide a landscape architect or other qualified professional to oversee and verify the planting process and its successful establishment.
7. Inspection Log. The permit holder shall provide a qualified professional to conduct inspections and maintain an inspection log for the site. All best management practices shall be inspected within 24 hours after each rain event of 0.5 inch or more that results in runoff, or at least once each week. The inspection log shall include the name of the inspector, the date and time of inspection, a description of the present phase of construction, the findings of the inspection, including an assessment of the condition of erosion and sediment control measures and the installation of storm water management BMPs, and any action needed or taken to comply with this ordinance. The inspection log shall also include a record of BMP maintenance and repairs conducted under subs. 8 and 9 below. The permit holder shall maintain a copy of the inspection log at the construction site or via the Internet, and shall notify the Designated City Representative of the method of availability upon permit issuance. If the inspection log is maintained on site, the Designated City Representative may view or obtain a copy at any time during normal business hours until permit termination under sub. (b) below. If the inspection log is made available via the Internet, the permit holder shall notify the Designated City Representative of the appropriate Internet address and any applicable access codes, and shall maintain the availability of the log until permit termination under sub. (b) below.
8. BMP Maintenance. The permit holder shall maintain and repair all best management practices within 24 hours of inspection, or upon notification by the Designated City Representative, unless the Designated City Representative approves a longer period due to

- weather conditions. All BMP maintenance shall be in accordance with approved plans and applicable technical standards until the site is stabilized and a permit termination letter is issued under sub. (b) below. The permit holder, upon approval by the Designated City Representative, shall remove all temporary erosion control practices such as silt fence. The permit holder, in accordance with approved plans and applicable technical standards, shall maintain permanent storm water management practices until maintenance responsibility is transferred to another party or unit of government pursuant to the recorded maintenance agreement.
9. Other Repairs. The permit holder shall be responsible for any damage to adjoining properties, municipal facilities or drainage ways caused by erosion, siltation, runoff, or equipment tracking. The Designated City Representative may order immediate repairs or clean-up within road right-of-ways or other public lands if the Designated City Representative determines that such damage is caused by activities regulated by a permit under this ordinance. With the approval of the landowner, the Designated City Representative may also order repairs or clean-up on other affected property.
  10. Emergency Work. The permit holder authorizes the Designated City Representative, in accordance with the enforcement procedures under Sec. 14, to perform any work or operations necessary to bring erosion control or storm water management practices into conformance with the approved plans in accordance to the permit. The permit holder consents to paying for such costs directly or they will be charged against the escrow or financial assurance pursuant to sub. (c) below or to a special assessment or charge against the property as authorized under Subch. VII of Ch. 66, Wisconsin Statutes.
  11. Permit Display. The permit holder shall display the storm water permit in a manner that can be seen from the nearest public road and shall protect it from damage from weather and construction activities until permit termination under sub. (b) below.
  12. Other Requirements. The Designated City Representative may include other permit requirements that the Designated City Representative determines are necessary to ensure compliance with this ordinance.

**(b) Storm Water Permit Issuance, Duration, Amendments, Transfer and Termination.**

1. Permit issuance. The Designated City Representative shall issue a permit to the applicant after verifying that all applicable conditions of this ordinance and possibly other related permits have been met, including the submittal of contact information for all responsible parties and the submittal of the financial assurance under sub. (c) below. The Designated City Representative may delay issuance of a storm water permit if the Designated City Representative determines that the proposed construction timelines and best management practices will

not comply with the erosion control plan requirements under Sec. 9 or the purposes of the ordinance under Sec. 4, including proposed late season new road construction with grass swales.

Note: The Designated City Representative has determined that it is difficult and/or costly to avoid adverse impacts to other property and the environment to construct new roads with grass swales after standard seeding deadlines for cool season grasses.

2. Permit duration. The Designated City Representative shall establish an expiration date for all storm water permits based on the construction schedules in the approved erosion control and storm water management plans. The applicant shall notify the Designated City Representative of any changes to the proposed schedule prior to permit issuance.
3. Permit amendments. The Designated City Representative may amend any terms of a storm water permit, including extending the permit expiration date, if the Designated City Representative determines it is necessary to ensure compliance with this ordinance. The applicant shall request an amendment to a storm water permit at least 2 weeks before permit expiration on a form provided by the Designated City Representative for that purpose and shall pay the corresponding fee. The Designated City Representative may require additional erosion control or storm water management measures as a condition of granting a permit amendment.
4. Permit transfer. The Designated City Representative may transfer a storm water permit issued under this ordinance to a new applicant upon a written request from the applicant and payment of the corresponding fee. The permit transfer shall not take effect until the Designated City Representative verifies in writing that the new applicant has satisfied all conditions of this ordinance, including an updated list of responsible parties and the submittal of a new financial assurance under sub. (c) below.
5. Permit termination. The Designated City Representative shall issue a permit termination letter to the permit holder upon releasing the financial assurance under sub. (c) below, which shall serve as documentation that all conditions of this ordinance have been satisfied and the permit has been terminated. A copy of this letter shall also be sent to the Wisconsin Department of Natural Resources and shall serve as the "Notice of Termination" under s.s. NR 216.55 Wis. Admin. Code.

**(c) Financial Assurance.**

1. Purpose. The Designated City Representative shall require the applicant to submit a financial assurance to ensure compliance with the approved erosion control and storm water management plans and other storm water permit requirements.
2. Type and Authority. The Designated City Representative shall determine the acceptable type and form of financial assurance, which may include cash, a bond, an escrow account or irrevocable letter of

- credit. The Designated City Representative shall, upon written notice to the permit holder, be authorized to use the funds to complete activities required in the approved plans or this ordinance if the permit holder or other responsible party defaults or does not properly implement the requirements.
3. Amount. The amount of the financial assurance shall be determined by the Designated City Representative and shall not exceed the estimated cost of completing the approved erosion control and storm water management plans.
  4. Exemption. Publicly funded land disturbing or land development activities shall be exempt from providing a financial assurance.
  5. Security. The Designated City Representative shall provide the permit holder or other responsible party a written statement outlining the purpose of the financial assurance, the applicable amount and type received and all of the conditions for release.
  6. Conditions for Release. The Designated City Representative shall release the financial assurance, and issue a termination letter in accordance with sub, (b)5. above, only after determining full compliance with the permit and this ordinance, including the following:
    - A. Accepting an "as-built" survey certified pursuant to sub. (d)1. below;
    - B. Accepting verification of construction pursuant to sub. (d)2. below;
    - C. Completing a satisfactory final inspection pursuant to sub (e) below;
    - D. Receiving a copy of the recorded maintenance agreement pursuant to Sec. 12 of this ordinance.
  7. Partial Releases. The permit holder may apply for a partial release of the financial assurance based on the completion or partial completion of various construction components or satisfaction of individual requirements noted above.
  8. Amounts Withheld. The Designated City Representative shall withhold from the financial assurance amount released to the permit holder any costs incurred by the Designated City Representative to complete installation or maintenance of best management practices through enforcement action or prior to the transfer of maintenance responsibilities through an approved maintenance agreement, or other unpaid fees or costs incurred by the Designated City Representative associated with the enforcement of this ordinance.
  9. Other Financial Assurances. The financial assurance provisions of this ordinance shall be in addition to any other financial assurance requirements of other site improvements. Any arrangements made to share financial assurances shall be made at the discretion of the Designated City Representative and shall be at least as restrictive the requirements in this ordinance.

**(d) Construction and Planting Verification.**

1. As-built Survey. To ensure compliance with this ordinance and to serve as a basis for the engineering verification under sub. 2 below, an as-built survey shall be completed in accordance with Designated City Representative standards and certified as accurate by a registered land surveyor or an engineer licensed in the State of Wisconsin. As-built plans shall be submitted to the Designated City Representative for all storm water management BMPs, bridges and culverts pursuant to Sec. 10(d).6.D. below, and other permanent best management practices or other practices as deemed necessary by the Designated City Representative to ensure its long-term maintenance. The Designated City Representative may require a digital submittal of the as-built survey, in accordance with Designated City Representative standards.
2. Verification. A professional engineer licensed in the State of Wisconsin shall verify, in accordance with Designated City Representative standards, that the engineer has successfully completed all site inspections outlined in the approved plans and that the construction of all storm water management BMPs, as determined by the Designated City Representative, comply with the approved plans and applicable technical standards and/or otherwise satisfy all the requirements of this ordinance. If warm season or wetland plantings are involved, a landscape architect or other qualified professional shall verify the planting process and its successful establishment, in accordance with Designated City Representative standards.
3. Design Summaries. Any changes noted in the as-built survey or final design data compared to the design summaries approved with the final storm water management plans shall be documented and resubmitted to the Designated City Representative as part of the verification under sub. 2 above.

**(e) Final Inspection.** After completion of construction, the Designated City Representative shall conduct a final inspection of all permitted sites to determine compliance with the approved plans and other applicable ordinance requirements, including ensuring the site is stabilized. If, upon inspection, the Designated City Representative determines that any of the applicable requirements have not been met, the Designated City Representative shall notify the permit holder what changes would be necessary to meet the requirements. At the request of the permit holder, the Designated City Representative shall provide a notification of noncompliance or a report of final inspection in written or electronic form.

## **Sec. 9. Plan Requirements – Construction Site Erosion Control**

### **(a) General Erosion Control Plan Requirements and Performance**

**Standards.** An erosion control plan shall describe how the permit holder and other responsible party will minimize, to the maximum extent practicable, soil

erosion and the transport of sediment from land disturbing activities. To meet this requirement, the following performance standards shall apply:

1. All erosion control plans and associated BMPs shall comply with the planning, design, implementation and maintenance requirements of this ordinance.
2. All erosion control plans shall by design, achieve to the maximum extent practicable, a reduction of 80% of the sediment load carried in runoff, on an average annual basis, as compared with no sediment or erosion controls, until the site is stabilized.
3. Erosion and sediment control BMPs may be used alone or in combination to meet the 80% sediment reduction goal. Plans that comply with the guiding principles described in sub. (b) below and the specific erosion control plan requirements described in sub. (c) below shall be determined by the Designated City Representative as meeting the 80% sediment reduction goal.
4. The Designated City Representative may recognize other methods for determining compliance with the 80% sediment reduction goals as they are standardized, including any methods that may come from the procedures under Subch. V. of Ch. NR 151, Wis. Adm. Code.

Note: Soil loss prediction tools are available that can estimate the sediment load leaving the construction site under varying land and management conditions and the application of erosion control BMPs. An example of such a tool is the Revised Universal Soil Loss Equation, published by the USDA-Natural Resources Conservation Service.

**(b) Guiding Principles for Erosion Control.** To satisfy the requirements of this section, an erosion control plan shall, to the maximum extent practicable, adhere to the following guiding principles:

1. Propose grading that best fits the terrain of the site, avoiding steep slopes, wetlands, floodplains and environmental corridors;
2. Minimize, through project phasing and construction sequencing, the time the disturbed soil surface is exposed to erosive forces.
3. Minimize soil compaction, the loss of trees and other natural vegetation and the size of the disturbed area at any one time;
4. Locate erosion control BMPs prior to runoff leaving the site or entering waters of the state and outside of wetlands, floodplains, primary or secondary environmental corridors or isolated natural areas
5. Emphasize the use of BMPs that prevent soil detachment and transport over those aimed to reduce soil deposition (sedimentation) or repair erosion damage.

**(c) Specific Erosion Control Plan Requirements.** The following applicable minimum requirements shall be addressed in erosion control plans to the maximum extent practicable. The Designated City Representative may establish more stringent erosion and sediment control requirements than the minimums set forth in this section if the Designated City Representative determines that an added level of protection is needed to protect an environmentally sensitive area or other property, or to address a change made during plan implementation.

1. Access Drives and Tracking. Provide access drive(s) for construction vehicles that minimize tracking of soil off site using BMPs such as stone tracking pads, tire washing or grates. Minimize runoff and sediment from adjacent areas from flowing down or eroding the access drive.
2. Diversion of Upslope Runoff. Divert excess runoff from upslope land, rooftops or other surfaces, if practicable, using BMPs such as earthen diversion berms, silt fence and downspout extenders. Prevent erosion of the flow path and the outlet.
3. Inlet Protection. Protect inlets to storm drains, culverts and other storm water conveyance systems from siltation until the site is stabilized.
4. Soil Stockpiles. Locate soil stockpiles away from channelized flow and no closer than 25 feet from roads, ditches, lakes, streams, ponds, wetlands or environmental corridors, unless otherwise approved by the Designated City Representative. Control sediment from soil stockpiles. Any soil stockpile that remains for more than 30 days shall be stabilized.
5. Cut and Fill Slopes. Minimize the length and steepness of proposed cut and fill slopes and stabilize them as soon as practicable.
6. Channel Flow. Trap sediment in channelized flow before discharge from the site using BMPs such as sediment traps and sediment basins. Stabilize open channels in accordance with Designated City Representative standards as soon as practicable.
7. Outlet Protection. Protect outlets from erosion during site dewatering and storm water conveyance, including velocity dissipation at pipe outfalls or open channels entering or leaving a storm water management facility.
8. Overland Flow. Trap sediment in overland flow before discharge from the site using BMPs such as silt fence and vegetative filter strips.
9. Site Dewatering. Treat pumped water to remove sediment prior to discharge from the site, using BMPs such as sediment basins and portable sediment tanks.
10. Dust Control. Prevent excessive dust from leaving the construction site through construction phasing and timely stabilization or the use of BMPs such as site watering and mulch – especially with very dry or fine sandy soils.
11. Topsoil Application. Save existing topsoil and reapply a minimum of 4 inches to all disturbed areas for final stabilization, unless otherwise approved by the Designated City Representative, such as for temporary seeding or storm water infiltration BMPs. If adequate topsoil does not exist on the site to meet this requirement, it shall be imported.
12. Waste Material. Recycle or properly dispose all waste and unused building materials in a timely manner. Control runoff from waste materials until they are removed or reused.
13. Sediment Cleanup. By the end of each workday, clean up all off-site sediment deposits or tracked soil that originated from the permitted

- site. Flushing shall not be allowed unless runoff is treated before discharge from the site.
14. Final Site Stabilization. All previous cropland areas where land disturbing activities will not be occurring under the proposed grading plans, shall be stabilized upon permit issuance. Stabilize all other disturbed areas within 7 days of final grading and topsoil application. Large sites shall be treated in stages as final grading is completed in each stage. Any soil erosion that occurs after final grading or the application of stabilization measures must be repaired and the stabilization work redone.
  15. Temporary Site Stabilization. Any disturbed site that remains inactive for greater than 7 days shall be stabilized with temporary stabilization measures such as soil treatment, temporary seeding or mulching. For purposes of this subsection, "inactive" means that no site grading, landscaping or utility work is occurring on the site and that precipitation events are not limiting these activities. Frozen soils do not exclude the site from this requirement.
  16. Removal of Practices. Remove all temporary BMPs such as silt fences, ditch checks and sediment traps as soon as all disturbed areas have been stabilized.
  17. Site Drainage. Site drainage plans shall comply with the provisions of Sec. 10(d)6. below.

**(d) Preliminary Erosion Control Plan Contents.** Preliminary erosion and sediment control plans shall contain the following items:

1. A site map in accordance with Sec. 10 (c) below;
2. A brief narrative describing the proposed land disturbing activity, construction timeline and sequencing, and a general review of the major erosion and sediment control BMPs proposed to be used to minimize off-site impacts during the construction phase and to stabilize the site following construction.
3. Delineation of the following items on the map under par. 1 above:
  - A. The area and size (in acres) of the proposed land disturbance;
  - B. The woodland and wetland areas, and the size (in acres) of each that is proposed to be lost during construction and a general description of the current vegetation types and tree sizes;
  - C. The general location of major BMPs described in sub. 1 above.

**(e) Final Erosion Control Plan Contents.** The following shall be the minimum requirements for items to be included in a final erosion and sediment control plan:

1. Sites Less than One Acre of Total Land Disturbance.
  - A. A narrative describing the proposed land disturbing activity, construction timeline and sequencing, temporary BMPs to be used to minimize off-site impacts during the construction phase, and

- proposed methods to stabilize the site following construction in accordance with the requirements of this ordinance;
- B. A survey map or scaled site plan drawing of sufficient clarity showing a north arrow, the location of proposed land disturbance, direction of flow for runoff entering and leaving the disturbed area, upslope drainage area (if known), proposed BMPs, existing and proposed slopes, ground cover, buildings, roads, access drives, property boundaries, drainage ways, water bodies, trees, culverts, utilities and other structures within 50 feet of the proposed land disturbance;
  - C. The name, address and daytime phone number of the person(s) charged with installing and maintaining all best management practices;
  - D. For underground utility installations, the plans must delineate where utilities will be installed, show the location of the open cut and the topography in the area, and list the total lineal feet to be installed and the lineal feet that will be done by open cut; and
  - E. Other information determined to be necessary by the Designated City Representative to ensure compliance with the requirements of this chapter.
2. Sites One Acre or Greater in Total Land Disturbance.
- A. A site map in accordance with Sec. 10 (c) below;
  - B. A map at a scale of 1 inch equals no more than 100 feet (unless otherwise noted), delineating and labeling the following applicable items:
    - (i) North arrow, graphic scale, draft date, name and contact information for project engineer or planner and designation of source documents for all map features.
    - (ii) Proposed site topography at contour intervals not to exceed two feet, proposed percent slope for all open channels and side slopes and all proposed runoff discharge points from the site;
    - (iii) Proposed building envelopes and other land area to be disturbed and size in acres;
    - (iv) All woodland areas, those proposed to be lost or transplanted during construction and acres or numbers of each. For woodlands proposed to be lost, show individual trees larger than eight (8) inches in diameter that are located within twenty (20) feet of proposed grading boundaries;
    - (v) Temporary access drive and specified surface material and minimum depth;
    - (vi) Temporary flow diversion devices for upslope or roof runoff until site is stabilized;
    - (vii) Temporary sediment trapping devices for site perimeter and inlets to culverts and storm drains;
    - (viii) Temporary settling basin or other BMP to be used for site dewatering during utility or other subsurface work;

- (ix) Temporary soil stockpile sites indicating setbacks from nearby water resources or environmental corridors and the proposed erosion protection methods;
- (x) Detailed drawings and cross-sections for any sediment traps, basins or other major cut or fill areas requested by the Designated City Representative, showing side slopes and elevations;
- (xi) Final stabilization measures for open channels and erosion protection for pipe and channel inlets, outlets and emergency spillways;
- (xii) Location of proposed utilities, including: standard cross-section for buried utilities, associated easements, labeling the type of utility and notes on erosion control and restoration plans;
- (xiii) Final site stabilization instructions for all other disturbed areas, showing areas to be stabilized in acres, depth of applied topsoil, seed types, rates and methodology, fertilizer, sod or erosion matting specifications, maintenance requirements until plants are well established, and other BMPs used to stabilize the site;
- (xiv) Detailed construction notes clearly explaining all necessary procedures to be followed to properly implement the plan, including estimated starting date of grading, timing and sequence of construction or demolition, any construction stages or phases, utility installation, dewatering plans, refuse disposal, inspection requirements, and the installation, use, and maintenance of best management practices proposed in the plan;
- (xv) Location of soil evaluations with surface elevations and unique references to supplemental soil evaluations report forms in accordance with Sec. 11(e) below. A separate map shall show estimated seasonal water table depths and soil textures down to planned excavation depths with sufficient references to the proposed site plan.

Note: Water table depths are needed to plan for dewatering activities for excavations and utility installations and to document compliance with water table separation requirements under sub. 10(e) below. The separate map may be at a different scale if needed. Soil textures help the project engineer and grading contractor plan for excavation, soil stockpiles, earthen berm compaction, pond lining, dust control, site stabilization and other grading related activities.

- (xvi) Other items specified by the Designated City Representative as necessary to ensure compliance with this ordinance.

C. Supporting information:

- (i) A narrative summary of the erosion control plan, briefly explaining the overall plan and, any unique information that led to the selection of BMPs and how the plan meets the guiding principles under sub. (b) above and the specific requirements under sub. (c) above;

Note: This information may be combined with a narrative for the storm water management plan under Sec. 9(c). The information may also be useful to the

grading contractor and could be included in the construction notes on the plan map under sub. B(xiv) above.

- (ii) Summary of design data for any structural BMP such as sediment basins or sediment traps. A professional engineer, licensed in the State of Wisconsin, shall stamp and sign a statement approving all designs and certifying that they have read the requirements of this ordinance and that, to the best of their knowledge, the submitted plans comply with the requirements;
- (iii) Open channel design and stabilization data to support the selected BMPs for stabilization;
- (iv) Soil evaluation reports, in accordance with the standards in Sec. 11(e), with unique references and elevations that match the map under sub. B(xv) above.
- (v) Estimated time soil stockpiles will exist to support the selected BMPs for erosion control;
- (vi) Documentation that proposed utility locations and installation scheduling has been coordinated with the affected utility companies.
- (vii) Documentation of any other calculations used to demonstrate compliance with the performance standards in this section.

## **Sec. 10. Plan Requirements – Storm Water Management**

**(a) General Storm Water Management Plan Requirements.** A storm water management plan shall describe how the permit holder and other responsible party will meet the storm water management requirements of this section and other related requirements in this ordinance. All storm water management plans and associated BMPs shall comply with the planning, design, implementation and maintenance requirements described in this ordinance to achieve a no net increase in runoff from the disturbed site.

**(b) Guiding Principles for Storm Water Management.** A storm water management plan shall, to the maximum extent practicable, adhere to the following principles:

1. Preserve natural watershed boundaries and drainage patterns;
2. Reserve adequately sized areas for storm water infiltration, detention and treatment early in the site planning process;
3. Locate storm water BMPs prior to runoff leaving the site or entering waters of the state, wetlands, floodplains, primary or secondary environmental corridors or isolated natural areas;
4. Minimize soil compaction and maintain pre-development groundwater recharge areas;
5. Minimize impervious surfaces and have them drain to vegetated areas for pollutant filtering and infiltration;
6. Emphasize vegetated swales, warm season and wetland plantings, and low flow velocities for storm water conveyance, treatment and infiltration, especially for transportation related projects;

Note: Tall, dense, deep-rooted vegetation and low flow velocities in open channels encourages infiltration and increases their effectiveness for runoff pollutant removal. Check dams may also be included in the swale design to slow runoff flows and improve pollutant removal. Soil amendments such as compost can help reduce soil compaction and increase infiltration.

7. Allow for different storm water management strategies for cleaner runoff (i.e. roofs) versus more polluted runoff (i.e. heavily used streets and parking lots);
8. Provide for emergency overflow in all storm water BMP designs;
9. Distribute storm water bioretention and infiltration BMPs throughout the site plan for large land developments;

**(c) Site Plan Map Requirements.** A site plan map and supporting data of site conditions at a scale of 1 inch equals no more than 100 feet (unless otherwise noted) shall delineate or display all the following applicable items:

1. Development title, graphic scale and north arrow;
2. Property location description by public land survey system (1/4 section, section, township, range, county);
3. Location map (smaller scale) showing the site location within a public land survey section or subdivision, oriented the same as par. 4 below;
4. Ownership boundaries, bearings, lengths and other survey references that will accurately identify the sites location, in accordance with s. 236 Wisconsin Statutes and county and/or City mapping standards for all land divisions;
5. Lot numbers and dimensions, including outlots for all land divisions;
6. Name and complete contact information for the applicant, landowner, developer and project engineer;
7. Surveyor's certificate, signed, dated and sealed for all land divisions;
8. Sheet numbers and revision dates on every page;
9. Existing site topography at a contour interval not to exceed 2 feet, including spot elevations for physical features such as culvert (invert elevations), retaining walls, road and ditch centerlines and topographic high and low points;
10. Location and name, if applicable, of all lakes, streams, channels, ditches, and other water bodies or areas of channelized flow on or adjacent to the site;
11. Location and name, if applicable, of all wetlands and identification of source of delineation. For final land divisions, these boundaries shall be field verified;
12. Boundaries of shoreland zones and the ordinary high water mark (OHWM) for any navigable water body as defined by the Amery Shoreland Protection Zoning Ordinance. For final land divisions, the OHWM boundaries shall be field verified;
13. Boundaries and elevation of the 100-year floodplains, flood fringes and floodways, as defined by the Amery Shoreland Protection Zoning Ordinance. For final land divisions, these boundaries and elevations shall be field verified;

14. Boundaries and soil symbol for each soil mapping unit and the identification of all hydric soils as defined by the USDA-Natural Resources Conservation Service;
15. Locations of all available soil borings or soil profile evaluations with unique references to supplemental data report forms;
16. Location of primary and secondary environmental corridors, as defined by the Northwestern Wisconsin Regional Planning Commission. For final land divisions, these boundaries shall be field verified;
17. Location and description of isolated natural area boundaries as defined by the Northwestern Wisconsin Regional Planning Commission, woodland areas and other vegetative cover types;
18. Location and descriptive notes for existing and proposed structures within 50 feet of the property boundaries and their proposed use, including, but not limited to buildings and foundations, roads, parking areas, fence lines, access lanes, culverts (include size and type), above ground utilities and retaining walls;
19. Location and descriptive notes for other known existing site features including, but not limited to rock outcrops or other karst features, tile drains, buried utilities, dumps, landfills, manure or other waste storage facilities;
20. Boundaries and descriptive notes for all applicable setbacks and for "protective areas", as specified in Sec.10(d)4. of this ordinance;
21. Location and descriptive notes for any existing or proposed easements, right-of-ways, vision corners or other known site restrictions. Road right-of ways and building setbacks shall be in compliance with all applicable administrative codes, adopted plans and ordinances;
22. Location and descriptive notes for existing and proposed public dedications of parcels or right-of-ways;
23. Location and descriptive notes for preplanned building or waste disposal sites, when limited by site features;
24. Location and documentation of any existing well and delineation of any applicable regulatory setbacks, in accordance with Ch. NR 811 and 812 Wis. Admin. Code;
25. Notes describing source documents, date and measure of accuracy for all applicable mapping features noted above;
26. Other site information that the Designated City Representative determines is necessary to administer this ordinance.

Note: The Designated City Representative will provide the applicant with a written checklist of the above items, including guidance on which items are applicable to the proposed project. Items may need to be displayed on more than one map for purposes of clarity.

**(d) Specific Storm Water Management Plan Requirements and Performance Standards.** All storm water management plans and associated BMPs shall meet the following minimum requirements to the maximum extent practicable. It is highly recommended that the applicant meet with the Designated City

Representative prior to preparing a storm water management plan to determine the applicability of these requirements early in the site planning process.

1. Peak Discharge.

A. Minimum requirement. To minimize erosion and the failure of conveyance systems, the calculated post-development peak storm water discharge rate shall not exceed the calculated pre-development discharge rates for the 2-year, 10-year, and 100-year, 24-hour design storms. Modeling requirements for this provision are further described in Sec. 11.

B. Release Rate Per Acre. The Designated City Representative may establish a maximum allowable release rate on a per acre basis that would supercede the requirements of sub. A. above for certain watersheds after the necessary hydrologic modeling is completed and the maximum release rate is established.

Note: A detailed watershed-based hydrologic analysis can generate a more accurate peak discharge rate for the protection of downstream properties from increased flooding due to the addition of impervious surfaces.

C. Peak Discharge Exemptions. Certain sites or portions of sites may be exempted from the peak discharge requirements of this subsection in accordance with sub. (e) below.

2. Total Suspended Solids.

A. By design, each storm water management plan shall meet the following post-development total suspended solids reduction targets, based on average annual rainfalls, as compared to no runoff management controls:

- (i) For new land development, 80% reduction in total suspended solids load;
- (ii) For redevelopment, 40% reduction of total suspended solids load;
- (iii) For in-fill development that occurs prior to October 1, 2012, 40% reduction total suspended solids load;
- (iv) For in-fill development that occurs after October 1, 2012, 80% reduction of total suspended solids load.

Note: The first flush of storm water runoff from an urban landscape contains the vast majority of pollutants, which tend to be associated with suspended solids. Pollutant loading models such as SLAMM, P8 or equivalent methodology may be used to evaluate the efficiency of the design in reducing total suspended solids under sub. A above.

3. Infiltration. BMPs shall be designed, installed, and maintained to infiltrate runoff in accordance with the following requirements, except as provided in subs. E. through H. below.

A. Residential. For residential developments one of the following shall be met:

- (i.) Infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 100% of the pre-development infiltration volume, based on an average annual rainfall. However, when designing appropriate infiltration systems to meet this requirement, no more than 1% of the project site is required as an effective infiltration area.
  - (ii.) Infiltrate 25% of the post-development runoff volume from the 2-year, 24-hour design storm with a type II distribution. Separate runoff curve numbers for pervious and impervious surfaces shall be used to calculate runoff volumes, not composite curve numbers, as prescribed in Sec. 11. However, when designing appropriate infiltration systems to meet this requirement, no more than 1% of the project site is required as an effective infiltration area.
- B. Non-residential. For non-residential development, including commercial, industrial and institutional development, one of the following shall be met:
- (i) Infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 60% of the pre-development infiltration volume, based on an average annual rainfall. However, when designing appropriate infiltration systems to meet this requirement, no more than 2% of the project site is required as an effective infiltration area.
  - (ii) Infiltrate 10% of the post-development runoff volume from the 2-year, 24-hour design storm. Separate curve numbers for pervious and impervious surfaces shall be used to calculate runoff volumes, not composite curve numbers, as defined in TR-55. However, when designing appropriate infiltration systems to meet this requirement, no more than 2% of the project site is required as an effective infiltration area.
- C. Modeling. Refer to Sec. 11(a) for details on calculating runoff volumes and pre-development conditions.
- D. Pretreatment. Pretreatment shall be required before infiltrating parking lot and road runoff from commercial, industrial and institutional areas. The pretreatment shall be designed to protect the infiltration system from clogging prior to scheduled maintenance and to protect groundwater quality in accordance with sub. H below. Pretreatment options may include, but are not limited to, oil/grease separators, sedimentation or bioretention basins, filtration swales or filter strips. All designs shall comply with the technical standards in Sec. 11(b).

Note: To achieve the infiltration requirement for the parking lots or roads, "maximum extent practicable" should not be interpreted to require significant topography changes that create an excessive financial burden. To minimize potential groundwater impacts, it is desirable to infiltrate the cleanest runoff. To achieve this, a

design may propose greater infiltration of runoff from low pollutant sources such as roofs, and less from higher pollutant source areas such as parking lots.

- E. Infiltration Exclusions. Infiltration of runoff shall not be credited toward meeting the requirements of this subsection, and are prohibited to minimize the potential for groundwater contamination, for the following:
- (i). Runoff from outdoor material storage and loading docks for tier 1 and tier 2 industrial facilities, as identified in NR 216(2) Wis. Admin. Code.
  - (ii). Runoff from fueling and vehicle maintenance areas, not including rooftops and canopies.
  - (iii). Infiltration of runoff within 1000 feet upgradient or within 100 feet downgradient of karst features.
  - (iv). Infiltration of runoff from any area except rooftops with less than 3 feet separation distance from the top of the filtering layer to the elevation of seasonal high groundwater or the top of bedrock.
  - (v). Infiltration of runoff from industrial, commercial and institutional parking lots and roads and residential arterial roads with less than 5 feet separation distance from top of the filtering layer to the elevation of seasonal high groundwater or the top of bedrock.
  - (vi). Areas within 400 feet of a community water system well as specified in s. NR 811.16(4), Wis. Adm. Code, or as required by applicable wellhead protection ordinances, or within 100 feet of a private well as specified in s. NR 812.08(4), Wis. Adm. Code, for runoff infiltrated from commercial, industrial and institutional land uses or regional devices for residential development, not including rooftop runoff.
  - (vii). Areas where contaminants of concern, as defined in s. NR 720.03(2), Wis. Adm. Code are present in the soil through which infiltration will occur.
  - (viii). Areas associated with tier 1 industrial facilities identified in s. NR 216.21 (2) (a), including storage, loading, rooftop and parking.
  - (ix). Any area where the soil does not exhibit one of the following characteristics between the bottom of the infiltration system and the seasonal high groundwater and top of bedrock: at least a 3-foot soil layer with 20% fines or greater; or at least a 5-foot soil layer with 10% fines or greater.

Note: This paragraph does not apply where the soil medium within the infiltration system provides an equivalent level of protection and does not prohibit infiltration of roof runoff.

- F. Infiltration Exemptions. The infiltration requirements of this subsection do not apply to frozen soil conditions and may be exempted if soils have a measured infiltration rate of less than 0.6 inches per hour and the Designated City Representative determines it would be impracticable to modify existing soil conditions. Other sites may be exempted in accordance with sub.(e). below.
- G. Alternate runoff uses. Where storage and reuse of runoff are employed, such as to support green roofs, landscape watering, toilet flushing, laundry or irrigation, such alternate uses shall be given equal credit toward the infiltration volume required by this section.
- H. Groundwater protection.
  - (i). Infiltration systems designed in accordance with this subsection shall, to the extent technically and economically feasible, minimize the level of pollutants infiltrating to groundwater and shall maintain compliance with the preventive action limit at a point of standards application in accordance with Chapter NR 140 Wis. Adm. Code. However, if site-specific information indicates that compliance with a preventive action limit is not achievable, the infiltration BMP may not be installed or shall be modified to prevent infiltration to the maximum extent practicable.
  - (ii). The discharge from BMPs shall remain below the enforcement standard at the point of standards application.
  - (iii). No storm water BMP shall be installed that meets the definition of an injection well under Chapter NR 812 Wis. Admin. Code.
  - (iv). All storm water BMPs shall comply with the provisions of any applicable wellhead protection plan for a community water supply under Chapter NR 811 Wis. Admin. Code.

#### 4. Protective Areas.

- A. "Protective area" means an area of land that commences at the top of the channel of lakes, streams and rivers, or at the delineated boundary of wetlands, and that is the greatest of the following widths, as measured horizontally from the top of the channel or delineated wetland boundary to the closest impervious surface. However, in this section, "protective area" does not include any area of land adjacent to any stream enclosed within a pipe or culvert, such that runoff cannot enter the enclosure at this location (minimums listed below).
  - (i). For perennial and intermittent streams, 75 feet.
  - (ii). For lakes, 75 feet.

- (iii). For highly susceptible wetlands, as determined by the Designated City Representative, 50 feet. Highly susceptible wetlands include the following types: fens, sedge meadows, bogs, low prairies, conifer swamps, shrub swamps, other forested wetlands, fresh wet meadows, shallow marshes, deep marshes and seasonally flooded basins.
- (iv). For less susceptible wetlands, 10 percent of the average wetland width, but no less than 10 feet nor more than 30 feet. Less susceptible wetlands include degraded wetlands dominated by invasive species such as reed canary grass.
- (v). In subd. A.(i), (iv) and (v), determinations of the extent of the protective area adjacent to wetlands shall be made on the basis of the sensitivity and runoff susceptibility of the wetland in accordance with the standards and criteria in Chapter NR 103 Wis. Admin. Code.
- (vi). For concentrated flow channels with drainage areas greater than 130 acres, 10 feet.

**B. Requirements.** The following requirements shall be met for all land development activity located within a protective area:

- (i). Impervious surfaces shall be kept out of the protective area, except for boathouses and walkways authorized under Wis. Admin. Code NR 115 and applicable shoreland and/or floodplain zoning. The erosion control plan shall contain a written site-specific explanation for any parts of the protective area that are disturbed during construction.
- (ii). Where land disturbing activity occurs within a protective area, and where no impervious surface is present, adequate sod or self-sustaining vegetative cover of 70% or greater shall be established and maintained. The adequate sod or self-sustaining vegetative cover shall be sufficient to provide for bank stability, maintenance of fish habitat and filtering of pollutants from upslope overland flow areas under sheet flow conditions. Non-vegetative materials, such as rock riprap, may be employed on the bank as necessary to prevent erosion, such as on steep slopes or where high velocity flows occur.

Note: It is recommended that seeding of non-aggressive native vegetative cover be used in the protective areas. Vegetation that is flood and drought tolerant and can provide long-term bank stability because of an extensive root system is preferable. Vegetative cover can be measured using the line transect method described in the University of Wisconsin Extension publication number A3533, titled "Estimating Residue Using the Line Transect Method".

- (iii.) Best management practices such as filter strips, swales, or wet detention basins, which are designed to control pollutants from non-point sources, may be located in the protective area as reviewed and approved by Designated City Representative on a

site-by-site basis, but shall not encroach into wetlands, floodplains or primary or secondary environmental corridors.

Note: Other regulations, such as Ch. 30, Wisconsin Statutes, and Chs. NR 103, 115, 116 and 117, Wis. Adm. Code, and their associated review and approval process may apply in the protective area.

- C. Protective Area Exemptions. The protective area requirements of this subsection may be exempted in accordance with sub. (e) below and do not apply to the following:

- (i). Structures that cross or access surface waters such as boat landings, bridges and culverts;
- (ii). Structures constructed in accordance with s. 59.692(1v), Wisconsin Statutes; and
- (iii). Sites where runoff does not enter the surface water, except to the extent that vegetative ground cover is necessary to maintain bank stability.

Note: A vegetated protective area to filter runoff pollutants from post-construction sites described in sub. 4.C above is not necessary since runoff is not entering the surface water at that location. Other practices, necessary to meet the requirements of this section, such as a swale or basin, will need to be designed and implemented to reduce runoff pollutants before the runoff enters a surface water of the state.

5. Fueling and Vehicle Maintenance Areas. Fueling and vehicle maintenance areas shall have BMPs designed, installed and maintained to reduce petroleum within runoff, such that the runoff that enters waters of the state contains no visible petroleum sheen.

Note: A combination of the following BMPs may be used: oil and grease separators, canopies, petroleum spill cleanup materials, or any other structural or non-structural method of preventing or treating petroleum in runoff.

6. Site Drainage. Measures shall be implemented to ensure proper site drainage, prevent property damage and protect public health and safety, including the following minimum requirements:

- A. Drainage easement. Perpetual drainage easements or other deed restrictions shall be recorded on the property to preserve storm water flow paths and permanent storm water BMP locations. Recorded covenants in these areas shall not allow buildings or other structures and shall prevent any grading, filling or other activities that interrupt or obstruct flows in any way. Recorded covenants shall also specify maintenance responsibilities and authorities in accordance with Sec. 12.
- B. Site grading. Site grading shall ensure positive flows away from all buildings, roads, driveways and septic systems, be coordinated with the general storm water drainage patterns for the area, and minimize adverse impacts on adjacent properties.

- C. Street drainage. All street drainage shall be designed to prevent concentrated flows from crossing the traffic lanes to the maximum extent practicable. Design flow depths at the road centerline for on-street drainage, shall not exceed six (6) inches during the peak flows generated by the 100-year, 24 hour design storm, using planned land use conditions for the entire contributing watershed area.
- D. Bridges and cross-culverts. All new or modified bridges and cross-culverts shall comply with applicable design standards and regulations, facilitate fish passage and prevent increased flooding or channel erosion upstream or downstream from the structure. Design flow depths at the road centerline for all crossings shall not exceed six (6) inches during the peak flows generated by the 100-year, 24-hour design storm, using planned land use conditions for the entire contributing watershed area. All predevelopment runoff storage areas within the flow path upstream of bridges and cross-culverts shall be preserved and designated as drainage easements, unless compensatory storage is provided and accounted for in modeling. As-built documentation shall be submitted in accordance with Sec.8 for all new or modified structures that are located within a mapped floodplain or that the Designated City Representative determines to be necessary to maintain floodplain modeling for the applicable watershed.
- E. Subsurface drainage. Basement floor surfaces shall be built one (1) foot above the seasonal high water table elevation, as documented in the submitted soil evaluations, and shall avoid hydric soils as much as possible. The Designated City Representative shall be notified of any drain tiles that are uncovered during construction, which the Designated City Representative may require to be restored or connected to other drainage systems. No discharge of groundwater from tile lines, sump pumps or other means shall be allowed onto another persons land or any public space without the written approval of the owner or unit of government.
- F. Open channels. All open channel drainage systems shall at a minimum be designed to carry the peak flows from a 10-year, 24-hour design storm using planned land use for the entire contributing watershed area. Side slopes shall be no steeper than 3h:1v unless otherwise approved by the Designated City Representative for unique site conditions. Open channels that carry runoff from more than 130 acres shall at a minimum be designed to carry the peak flows from a 25-year, 24-hour design storm.
- G. Storm sewers. All storm sewers shall be designed in accordance with applicable City technical standards and specifications.

- H. Structure protection and safety. Flows generated by the 100-year, 24-hour design storm under planned land use conditions may exceed the design capacity of conveyance systems, but shall not come in contact with any buildings. For buildings designed for human occupation on a regular basis, the following additional requirements shall apply:
  - (i) The lowest elevation of the structure that is exposed to the ground surface shall be a minimum of two (2) feet above the maximum water elevation produced by the 100-year, 24 hour design storm, including flows through any storm water BMP that may temporarily or permanently store water at a depth of greater than one (1) foot; and
  - (ii) The structure shall be set back at least 50 feet horizontally from any storm water BMP that may temporarily or permanently store water at a depth of greater than one (1) foot. Setback distance shall be measured from the closest edge of water at the elevation produced by the 100-year, 24-hour design storm.
- 7. Additional Requirements. The Designated City Representative may establish more stringent requirements than the minimums set forth in this section, such as addressing thermal impacts of storm water or chronic wetness conditions, if the Designated City Representative determines that an added level of protection is needed to protect:
  - A. Low impact development for all new development or additional impervious. The first 1-inch of runoff from impervious areas shall be treated from drainage areas no larger than one acre. Treatment options include and may be limited to bioinfiltration, infiltration, rain gardens, stormwater reuse and buffers. Small practices shall be employed in large sites to the greatest extent possible.
  - B. An environmentally sensitive area;
  - C. A downstream property;
  - D. Public health or safety.

**(e) Technical Exemptions.**

- 1. Exemption Criteria. Following the provisions of this subsection, the Stormwater Review Committee may recommend to exempt a site or a portion of a site from meeting certain technical requirements of this section to the City Council for review and action, if the Designated City Representative determines that one or more of the following applies:
  - A. Off-Site BMP(s). The requirement has been satisfied through the use of off-site BMP(s). Off-site BMPs may be installed beyond the boundaries of the property covered by the application. However, to be eligible for this exemption, the off-site BMP(s) must treat runoff from the site covered by the application and have approval to use the off-site BMP(s) or lands to construct BMP(s);

- B. Internally Drained Sites. The site is internally drained and will not discharge runoff from the site after development occurs and has no potential impacts to groundwater; or
  - C. Site Conditions. It is impracticable to meet the requirement due to site conditions such as slopes, soils, proximity to structures or desirable trees, limited site dimensions, surrounding land uses, the potential for groundwater contamination, public health or safety problems, or other factors beyond the control of the applicant. No site shall be entitled to an exemption under this paragraph due solely to the size of the proposed land development activity in relation to the parcel size. Special consideration may be considered in granting exemptions under this paragraph for the following sites:
    - (i) Roadway projects where limited public right-of-way land is available for the installation of storm water BMPs.
2. Application for Exemption. An exemption under sub. 1. above may only be granted by the City Council upon the applicant submitting the following items to the Designated City Representative and reviewed by the Stormwater Review Committee, which shall constitute a completed application:
- A. A written request describing the provisions of this subsection for which an exception is being requested and an explanation of why;
  - B. A site plan in accordance with sub. (c) above, including the delineation of the area and size (in acres) to which the exemption would apply and any other storm water BMPs required to meet this ordinance or as recommended in a regional storm water management plan;
  - C. The necessary technical documentation to demonstrate that the site meets one or more of the criteria for which an exemption is being applied, including documentation of the applicable provisions of any regional storm water management plan that may be involved;
  - D. For off-site BMP(s) under sub. 1.A. above:
    - (i) Documentation that the necessary BMP(s) have been properly installed, including as-built plans, construction certification and design summaries in accordance with Sec. 8(d);
    - (ii) A copy of the recorded maintenance agreement in accordance with Sec. 12, and any other easements or legal arrangement that may be involved to ensure the long-term maintenance of the off-site BMP(s).
    - (iii) Documentation of payment of any applicable fees that may be required by a unit of government charged with implementing a regional storm water management plan.

Note: Fees may be through a storm water utility district or other unit of government and would usually be based on an equitable distribution of costs for land acquisition, engineering design, construction, certification and maintenance

of storm water BMPs implemented through the regional storm water management plan.

- E. Other materials that the Designated City Representative determines to be necessary to make a determination under this subsection or to comply with this ordinance.
- 3. Review Procedure. The Designated City Representative shall review all exemption application materials submitted under sub. 2 above, determine compliance and notify the applicant of a decision within 20 working days of the submittal date, in accordance with the procedures under Sec. 7(f) above. The Storm Water Committee shall approve all exemptions under sub. 1.C. above. The Designated City Representative shall review the submittal and provide a written review of the exemption request. In consideration of all exemption requests, the Designated City Representative shall ensure that the applicant meets the requirements to the maximum extent practicable.
- 4. Exemption Fee. For those sites that are exempted under this subsection, the applicant shall pay a fee to the Designated City Representative to be used exclusively for storm water BMP implementation or stream restoration expenses within the same watershed. Same watershed is considered same subwatershed as designated in the City of Amery Stormwater Management Plan. Consideration may be given for same basin or adjacent subwatershed if overall intent of ordinance is maintained for water quality and water quantity purposes. The fee amount shall be based on the average costs for the typical BMP(s) that would have been required on-site to comply with the requirements of this section if exemption was not granted. The Designated City Representative shall publish a fee schedule for this purpose, to be periodically updated to reflect current BMP costs.
- 5. Appeal. If the applicant does not agree with any determination of the Designated City Representative under this subsection, the applicant may appeal the decision pursuant to the procedures in Sec. 14(c).

**(f) Preliminary Storm Water Management Plan Requirements.** Preliminary storm water management plans shall contain the following applicable items:

- 1. Drafting date and contact information for the project engineer with all other mapping elements and scale consistent with the site plan map;
- 2. Delineation of existing and proposed watersheds, subwatersheds and major flow paths within the site and draining into the site from adjacent properties;
- 3. Location, type and preliminary design of proposed storm water BMPs needed to comply with this ordinance;
- 4. Location and type of major storm water conveyance systems proposed for the site;
- 5. Existing and proposed storm water discharge points;
- 6. Location and preliminary dimensions of proposed drainage easements;
- 7. Location of soil borings and soil profile evaluations with surface elevations and unique references to supplemental data sheets, as

needed to determine feasibility of any proposed storm water BMP and to comply with applicable BMP technical standards;

Note: The required location, depth and type of soil evaluations will depend on the storm water BMPs proposed for the site. In general, soil profile evaluations usually need to extend to a depth of 3-10 feet below the proposed bottom elevation of storm water BMPs. Refer to BMP technical standards for details.

8. Preliminary location of access lanes for maintenance of storm water BMPs; (Exemptions may be made by Designated City Representative. Assess lanes for maintenance intended for larger BMPs.)
9. Support documentation, including:
  - A. A preliminary plan narrative describing site drainage, ultimate receiving water body for off-site discharges, major site restrictions, and how the preliminary storm water management plan will meet the requirements of this ordinance and other objectives identified by the project engineer;
  - B. Summary of watershed, subwatershed and land use data in acres and the preliminary results of any hydrology calculations;
  - C. Soil profile evaluation data in accordance with BMP technical standards;
  - D. Proposed ownership and maintenance responsibilities for all proposed storm water BMPs.

Note: Mapping elements may be included in the site plan map.

**(g) Final Storm Water Management Plan Requirements.** Final storm water management plans shall contain the following applicable items:

1. Drafting date and contact information for the project engineer, with all other mapping elements and scale consistent with the site plan map;
2. Location of existing and proposed storm water discharge points;
3. Delineation and labeling of all proposed impervious areas and accompanying area computations;
4. Final design drawings of all proposed storm water BMPs with unique references to support documentation, prepared in accordance with minimum Designated City Representative standards and of sufficient clarity for those responsible for site grading, including:
  - A. Plan views showing the location of proposed BMPs in combination with the site plan map at a scale of 1 inch equals no more than 100 feet;
  - B. Additional detail plan view drawings at a scale of 1 inch equals no more than 40 lineal feet, showing proposed 2 foot contours and all critical design features and elevations;
  - C. Detailed cross-sections and profiles of each BMP showing all critical design features, side slopes, structures, soil profiles and applicable elevations, including seasonal high water table;
  - D. Detailed drawings or material specifications for inlets or outlets.
5. Type, size, location and cross-sections of all pipes, open channels, grade stabilization structures and other proposed storm water conveyance systems, with references to support documentation;
6. Location and dimensions of proposed drainage easements;

7. Location, dimensions and surfacing material or soils data of proposed access lanes and delineation of easements needed to allow future maintenance of all storm water BMPs in accordance with Sec. 12(b) below. The minimum width of any access easement shall be 15 feet; (Exemptions may be made by Designated City Representative for access lanes and easements or outlot designations. Assess lanes and easements for maintenance intended for larger BMPs.)
8. Location of soil borings and soil profile evaluations with surface elevations and references, as needed to determine feasibility of any proposed storm water BMP and to comply with technical standards;
9. Detailed construction notes explaining all procedures to implement the plan, including planting and landscaping specifications, timing and sequencing of construction and any temporary measures needed to protect BMPs during the construction phase;

Note: Some BMPs, such as infiltration and bioretention practices, are susceptible to sedimentation and may need to be protected during construction or planned for construction later in the project sequence.

10. A detailed construction inspection plan, outlining the critical elements in the plan that need to be surveyed or inspected by a representative of the project engineer, and the Designated City Representative, and the timing and notification requirements involved.

Note: Examples of critical elements for a construction inspection plan include, but are not limited to: checking subgrade elevations or the placement of footings, pipes or other structures prior to covering, soil testing, material inspections and final grade checks before seeding. Any inspections conducted by the Designated City Representative(s) or the City does not waive the permit holder's responsibility for construction oversight and verification.

11. A final storm water BMP maintenance agreement in accordance with Sec. 12;
12. Support documentation summarized in accordance with Designated City Representative standards, including but not limited to:
  - A. A narrative summary of the storm water management plan, briefly explaining any unique information that led to the selection of BMPs, how the proposed plan meets the guiding principles under sub. (b) above, and the specific storm water planning requirements under sub. (d) above.

Note: The narrative can be combined with the narrative for erosion control planning under Sec. 9 above. Some provisions may also be included in the construction notes under sub. 9. above.

- B. Maps of existing and proposed watersheds, subwatersheds, Tc/Tt flow paths, soil types, hydrologic soil groups, land uses/cover type and accompanying runoff curve numbers within the site and draining into the site from adjacent properties, with unique references to hydrology data summaries and a description of the ultimate receiving water body(s) for off-site discharges;
  - C. Pre-development and post-development hydrology and pollutant loading (if applicable) data for each watershed, such as peak flows and runoff volumes, as needed to meet the requirements of this

ordinance. All major assumptions used in developing input parameters shall be clearly stated and cross-referenced to the maps under par. B. above;

- D. Impervious surface maps and calculations of runoff volumes and effective infiltration areas, in accordance with sub. (d).3. above.
  - E. Hydraulic and hydrologic data summaries for all existing and proposed pipes, open channels, grade stabilization structures and other storm water conveyance systems, and the necessary documentation to demonstrate compliance with the site drainage requirements under sub. (d).6. above.
  - F. BMP design data for each proposed BMP, showing how it complies with applicable technical standards and the requirements of this ordinance;
  - G. Soil evaluation reports, following the standards in Sec. 11(e), with matching references to map features showing their location and elevations;
  - H. A cover sheet stamped and signed by a professional engineer registered in the State of Wisconsin indicating that all plans and supporting documentation have been reviewed and approved by the engineer and certifying that they have read the requirements of this ordinance and that, to the best of their knowledge, the submitted plans comply with the requirements.
  - I. Cost estimates for the installation of proposed storm water BMPs, which shall serve as a basis for the financial assurance under Sec. 8(c) above. The applicant may use average costs for BMP installations in the City rather than specific estimates, upon approval by the Designated City Representative.
  - J. For sites where changes are proposed in storm water flow paths, or where proposed storm water discharges may otherwise have a significant negative impact on downstream property owner(s), the Designated City Representative may require the applicant to submit written authorization or complete other legal arrangements with the affected property owner(s); and
13. Other items deemed necessary by the Designated City Representative to ensure compliance with the requirements of this ordinance.

## **Sec. 11. Technical Standards and Specifications**

### **(a) Hydrologic and Hydraulic Computations.**

1. Models. All computations of runoff volumes and peak flow rates used in the development of erosion control and storm water management plans in accordance with this ordinance shall be based on United States Department of Agriculture - Natural Resources Conservation Service (NRCS) methodology. Models such as SLAMM, P8 or other Designated City Representative approved models may be used to evaluate the efficiency of the design in reducing total suspended solids to meet this ordinance. Models such as RECARGA or other

Designated City Representative approved models may be used to evaluate the efficiency of the design in meeting the infiltration requirements of this ordinance.

2. Rainfall depths. To determine compliance with this ordinance, the following design storm rainfall depths shall be used:

| Design Storm      | 1-year<br>24-hour     | 2-year<br>24-hour     | 10-year<br>24-hour    | 25-year<br>24-hour    | 100-year<br>24-hour   |
|-------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Rainfall<br>Depth | <b>2.3<br/>inches</b> | <b>2.7<br/>inches</b> | <b>4.1<br/>inches</b> | <b>4.7<br/>inches</b> | <b>5.8<br/>inches</b> |

3. Runoff curve numbers. All computations of pre-development conditions as specified in this ordinance shall use those NRCS runoff curve numbers assigned for a "good" hydrologic condition for each land cover type. For lands where the pre-development land use was cropland, the following NRCS curve number values shall be used as maximums:

| Soil Hydrologic Group    | A  | B  | C  | D  |
|--------------------------|----|----|----|----|
| NRCS Runoff Curve Number | 33 | 58 | 72 | 78 |

Note: Soil hydrologic groups are available from the Designated City Representative and can be found on the county GIS System.

4. Average annual rainfalls. All modeling involving average annual rainfall or runoff volumes shall use rainfall data from the Minneapolis area between March 13 and November 4, 1959 as the typical annual rainfall pattern for Amery.
5. Rainfall distribution. All peak flow calculations shall use Type II rainfall distribution patterns, as defined in NRCS methodologies.
6. Other methods. All velocity and peak flow computations for open channels and storm sewer pipe flows shall be based on Manning's Formula. Flow routing, culvert design, weir and orifice flow and other related hydraulic computations used to design storm water management facilities shall be based on standard applicable engineering formulas. Any design data or methodology proposed to be used for hydrologic or hydraulic computations other than those prescribed in this ordinance shall be approved by the Designated City Representative. Revisions or updates to the rainfall depths and distribution prescribed above may be allowed upon approval by the applicable regulatory agencies and the Designated City Representative.

**(b) Best Management Practice (BMP) Design Standards.**

1. The design, installation and maintenance of all BMPs used to meet the requirements of this ordinance shall comply with the technical standards identified, developed or disseminated by the Wisconsin

- Department of Natural Resources under subchapter V of ch. NR 151, Wis. Adm. Code, or otherwise approved by the Designated City Representative.
2. Where BMP standards have not been identified or developed under sub. 1 above, the Designated City Representative may approve the use of other available standards.

**(c) Technical Guidelines.** The Designated City Representative may adopt technical guidelines for consistent administration of the provisions of this ordinance.

**(d) Construction Specifications.** The construction or installation of all BMPs shall comply with all applicable manufacturers and industry standards and specifications, including but not limited to those published by ASTM and the USDA - Natural Resources Conservation Service (NRCS).

**(e) Soil Evaluations.** All soil profile evaluations and forms submitted for review by the Designated City Representative under the provisions of this ordinance shall be completed in accordance with Chapter COM 85 Wis. Admin. Code and any applicable standards under sub. (b) above. Where there are no specific standards for the number, location or depth of soil profile evaluations for a proposed BMP, the Designated City Representative shall determine the minimum requirements based on the design of the BMP and the likely variability of the on-site soils.

**(f) Availability.** Copies of all technical references made in this section shall be available for review and distribution through the Designated City Representative by means of written request. Fees may be charged for hard copies of these items.

**(g) Future Revisions or Updates.** The technical references in this section are made a part of this ordinance and shall be updated periodically in order to keep current with field experiences, research, technological advances and the development of related technical standards by other agencies and units of government. Any future revisions of the documents incorporated herein are also made part of this ordinance unless otherwise acted upon by the Designated City Representative.

## **Sec. 12. Maintenance of Storm Water BMPs**

**(a) Maintenance Agreement Required.** A maintenance agreement shall be required for all permanent storm water BMPs installed to comply with the requirements of this ordinance. The maintenance agreement shall be independent of all other restrictions or covenants and shall comply with all provisions of this section.

**(b) Agreement Provisions.** The maintenance agreement shall, at a minimum, contain the following information and provisions:

1. Ownership. Identification of the owner(s) of the land parcel(s) where the storm water BMP(s) is located. Ownership shall be the same as those assigned maintenance responsibilities under sub. 6. below, unless otherwise designated in a regional storm water management plan and approved by the applicable unit(s) of government. For subdivisions, all storm water BMPs shall be located on outlots. For all privately owned outlots, ownership shall be by proportional undividable interest for all properties that are within the control of the applicant and drain to the BMP. However, the applicant may combine ownership of more than one BMP within the site;
2. Location. A legal description and survey map of the storm water BMP location(s), showing associated drainage or access easements required to maintain the BMP;
3. Design. Detailed drawings of each storm water BMP and a general description of its purpose and design, including but not limited to BMP dimensions and elevations, inlet and outlet designs and elevations and the drainage area served by the BMP. If possible, use as-built survey information.

Note: As-built information may not yet be available for new land divisions, depending on the timing of recording. In this case, use design information. See sub. (c)3. below for details on recording procedures.

4. Maintenance plan. A description of all maintenance activities that will be required for each BMP included in the agreement, and an estimated time interval between each activity;
5. Access. Authorization for vehicle access, including a minimum 15-foot wide access easement dedicated to the local municipality and connecting to a public road right-of-way, to allow for future BMP maintenance work. The access easement shall be of adequate soil conditions or surfacing to withstand loads produced by standard construction equipment, and shall not include any area where channelized flow of runoff occurs or where storm water may pond to a depth greater than six (6) inches during a 100-year, 24-hour design storm.
6. Maintenance responsibility. Identification of the person(s), organization, municipality or other entity responsible for all maintenance of the storm water BMP. The assignment of maintenance responsibilities for a privately owned storm water BMP shall, at a minimum, include all properties that are within the control of the applicant and drain to the BMP. However, the applicant may combine the maintenance responsibilities of more than one BMP within the site;
7. Inspections. Authorization for access to the property by the Designated City Representative and its designees to conduct inspections of the BMP, monitor its performance and maintenance, and notify the designated entity when maintenance or repair activities are necessary. A statement shall also be included that says, upon written notification

- by the local municipality or their designee, that the entity under sub. 6. above shall, at their own cost and within a reasonable time period, have a BMP inspection conducted by a qualified professional, file a report and complete any maintenance or repair work recommended in the report;
8. Municipal maintenance. Authorization for the Designated City Representative or their designee to carry out any maintenance activities and associated inspections if the entity identified under par. 6 above does not perform the required activity within the specified time period in the notification or if the local municipality does not accept the work conducted by the designated entity;
  9. Special assessment. A statement that the City of Amery may exercise their statutory authority to levy and collect a special assessment or charge pursuant to subch. VII of ch. 66 Wisconsin Statutes for any services carried out relating to sub. 7 or 8 above;
  10. Binding agreement. A statement confirming that the entire agreement shall remain binding on all subsequent owners of the property upon which the storm water BMP is located and that the restrictions shall run with the land and on any other property which is subject to maintenance responsibility in the agreement.
  11. Agreement modifications. Sole authorization of the City of Amery to modify the provisions of the agreement upon 30-day notice to the current owner(s) and other parties responsible for maintenance of the storm water BMP. Any changes made to the agreement shall maintain the minimum items listed in this subsection and ensure the long term maintenance of the BMP;
  12. Other. Other information as determined to be necessary by the Designated City Representative to ensure compliance with this ordinance.

Note: Many of the above noted activities may be carried out in accordance with an intergovernmental working agreement under s. 66.30 Wisconsin Statutes

**(c) Agreement Form, Approval and Recording.**

1. Form. The Designated City Representative shall provide the applicant with sample maintenance agreement forms that comply with the requirements of this section.
2. Approval. The Designated City Representative shall review and approve the form and content of all maintenance agreements proposed under this ordinance and ensure compliance with all provisions of this section. If the agreement does not comply, the Designated City Representative shall notify the applicant what changes are needed in order to comply, in accordance with the plan review procedures in Sec. 7(f) above.
3. Recording. Upon certification of compliance with subs. 1. and 2. above by the Designated City Representative, the maintenance agreement shall be recorded at the Polk County Register of Deeds referencing any plat, certified survey or other ownership transfer device pertaining

to land which contains the subject storm water BMP, or other practice subject to maintenance responsibility in the approved agreement. For new land divisions, the recording of the maintenance agreement shall occur simultaneously with the recording of the land division. However, no storm water BMP maintenance agreement shall be recorded prior to Designated City Representative approval. The Designated City Representative may require that the City Clerk, City Building Inspector or the Designated City Representative record the agreement.

4. Copy. The permit holder shall provide a copy of the recorded agreement, including evidence of the actual recording(s), to the Designated City Representative as a condition of release of the financial assurance under Sec. 8(c) above.

**(d) Maintenance Responsibilities Prior to a Maintenance Agreement.** The permit holder and other responsible party shall be responsible for the maintenance of all storm water BMPs prior to permit termination under Sec. 8(b).

### **Sec. 13. Illicit Discharges**

#### **(a) Prohibitions.**

1. Discharges. Except for storm water and other discharges specifically exempted under sub. (b) below, no discharge, spilling or dumping of substances or materials shall be allowed into receiving water bodies or onto driveways, sidewalks, parking lots or other areas that drain into the storm drainage system.
2. Connections. The construction, use, maintenance or continued existence of illicit connections to the storm drainage system is prohibited. This prohibition expressly includes, without limitation, illicit connections made prior to the adoption of this ordinance, regardless of whether the connection was permissible under law or practice applicable or prevailing at the time of connection.

**(b) Exemptions.** The following activities are exempt from the provisions of this section unless found to have an adverse impact on the storm water:

1. Discharges authorized by a permit issued by the Wisconsin Department of Natural Resources.
2. Discharges resulting from fire fighting activities.
3. Discharges from uncontaminated ground water, potable water source, roof drains, foundation drain and sump pump, air conditioning condensation, springs, lawn watering, individual residential car washing, water main and hydrant flushing and swimming pools if the water has been dechlorinated.

**(c) Notice of Violation.** Whenever the Designated City Representative finds a violation of this section, the Designated City Representative may order compliance by written notice of violation to the responsible party. Such notice may require without limitation:

1. The elimination of illicit connections or discharges;
2. That violating discharges, practices, or operations shall cease and desist;

3. The abatement or remediation of storm water pollution or contaminated hazards and the restoration of any affected property;
4. Any responsible party that fails to comply with a notice of violation under this section, shall be subject to further enforcement action under the provisions of Sec. 14.

#### **Sec. 14. Enforcement**

**(a) Prohibited Practices.** Not complying with any requirement of this ordinance shall be deemed a violation, and the responsible party shall be subject to enforcement action under this section. Prohibited practices shall include, but are not limited to:

1. Any land disturbing or land development activity prior to:
  - A. Obtaining a storm water permit;
  - B. Notifying the Designated City Representative a minimum of 2 working days in advance for sites that have obtained a storm water permit; or
  - C. The installation of the BMPs identified in the approved plans to be installed prior to any land disturbing or land developing activity.
2. Failing to apply for a Designated City Representative preliminary storm water review letter in accordance with subsection 7(b) of this ordinance.
3. Failing to obtain Designated City Representative certification of compliance for a final plat or certified survey map in accordance with subsection 7(d) of this ordinance.
4. Failing to comply with all permit conditions, erosion control or storm water management requirements and approved plans in accordance this ordinance.
5. Failing to maintain BMPs.
6. Failing to comply with any notice of violation.

**(b) Violations.** The Designated City Representative shall notify the permit holder of any violation in writing, and copy any other known responsible party involved in the violation. The written notice shall be hand delivered to the permit holder or sent to the last known address, with a reasonable attempt to verify that the permit holder received it. The notice shall describe the violation, remedial action(s) needed and a schedule for all remedial action to be completed. Any enforcement measures shall continue until compliance is achieved or as ordered by the court. The Designated City Representative is authorized to use the following methods of enforcement in any combination thereof against any applicant or responsible party that is found to be in violation of any provision of this ordinance:

1. Forfeiture. Any violator shall be subject to a forfeiture of not less than \$100 or more than \$1000 plus the cost of prosecution for each violation. Each day that a violation exists shall constitute a separate offense.
2. Stop Work Order. Any violator is subject to an order to stop all work except that which is needed as a corrective action to bring the site into compliance.

3. Permit Revocation. The Designated City Representative may revoke a permit issued under this ordinance. Upon loss of the permit, all construction shall cease and the site shall be stabilized, with any costs incurred by the City to be charged against the financial assurance.
4. Injunction. The City, or any person affected by activities regulated under this ordinance, may enforce the provisions of this ordinance by a temporary restraining order, injunction and other such relief as a court may order.
5. Declared nuisances. Any land disturbing or land development activity carried out in violation of the provisions of this Ordinance is hereby declared to be a nuisance per se, and the City may apply to any court of competent jurisdiction to restrain or abate such nuisance.
6. Emergency Action. The City may enter upon the property and take any necessary emergency action if the Designated City Representative determines that the site in violation is an immediate threat to public health, safety, welfare, the environment or downstream property, or if the permit holder or other violator refuses to take the corrective action as ordered by the Designated City Representative. Any cost incurred by the City as a result of this action shall be billed to the permit holder or other responsible party or subtracted from the financial assurance. The Designated City Representative shall provide reasonable notice to the permit holder and other responsible party after exercising this authority.
7. Citation. The City elects to also use the citation method of enforcement under Section 66.0113 of the Wisconsin Statutes for violations of this ordinance, including those for which a statutory counterpart exists. The procedures contained in Section 66.0113(3) of the Wisconsin Statutes, relating to the options of an alleged violator and default are adopted and incorporated herein by reference.

Authority to issue a citation under this ordinance shall be limited to an official or employees with the authority granted by the City Council or its designee. The authority delegated to such officials or employees to issue citations may only be granted or revoked by the City Council. This subsection does not preclude the City or any authorized officer from proceeding under any other ordinance or law or by any other enforcement method to enforce any ordinance regulation or order.

The schedule of cash deposits by law for use with citations issued under this section shall be as adopted by the City Council, such schedule shall be on file in the Amery Police Department, office of the City Clerk, and receipts shall be given for cash deposits. The citation shall contain the following information:

- A. The name and address of the alleged violator.
- B. The factual allegations describing the alleged violation.
- C. The time and place of the offense.

- D. The section of the ordinance violated.
- E. A designation of the offense in such a manner as can be reasonably understood by a person making a reasonable effort to do so.
- F. The time at which the alleged violator may appear in court.
- G. A statement which, in essence, informs the alleged violator:
  - (i) That a cash deposit based on the schedule established by the City Council, from time to time, and on file in the office of the City Clerk, be made to and deposited with the City Clerk or the Amery Police Department prior to the time of the scheduled court appearance.
  - (ii) That if a deposit is made, no appearance in court is necessary unless the alleged violator is subsequently summoned or the citation requests a court appearance.
  - (iii) That if a cash deposit is made and the alleged violator does not appear in court, he or she will be deemed to have entered a plea of no contest and submitted to a forfeiture, a penalty assessment, or a consumer information assessments. If the court does not accept the plea of no contest, a summons will be issued commanding him or her to appear in court to answer the complaint.
  - (iv) That if no cash deposit is made and the alleged violator does not appear in court at the time specified, the court may issue a summons or a warrant for the defendant's arrest or consider the nonappearance to be a plea of no contest and enter judgment or an action may be commenced to collect the forfeiture, penalty assessment, or consumer information assessments.
  - (v) That if the court finds that the violation involves an ordinance that prohibits conduct that is the same as or similar to conduct prohibited by state statute punishable by fine or imprisonment or both, and that the violation resulted in damage to the property of or physical injury to a person other than the alleged violator, the court may summon the alleged violator into court to determine if restitution shall be ordered.
- H. A direction that if the alleged violator elects to make a cash deposit, the statement which accompanies the citation shall be signed to indicate that the statement required under sub. 7. above has been read. Such statement shall be sent or brought with the cash deposit.
- I. Such other information as the City deems necessary.

**(c) Appeals.**

1. Authority. The City Council of Adjustment shall act as the review and appeal authority for any order, requirement, decision or determination by the Designated City Representative under this ordinance.
2. Procedure. The rules, procedures, duties and powers of the City Council of Adjustment shall be as provided in the City Code of

Ordinances and the provisions of §59.694, Wisconsin Statutes shall apply to any review or appeal under this ordinance.

3. **Variances.** Upon appeal, the City Council of Adjustment may authorize variances from the provisions of this ordinance which are not contrary to the public interest or the purposes of this ordinance, and where owing to special conditions beyond the control of the applicant, a literal enforcement of this ordinance will result in unnecessary hardship.
4. **Who May Appeal.** Appeals to the City Council may be taken by any aggrieved person or by an officer, or department affected by any decision of the Designated City Representative.

## **Sec. 15. Validity**

**(a) Repeal of conflicting Ordinances.** This ordinance repeals all provisions of an ordinance previously enacted under s. 59.693 relating to construction site erosion control and storm water management regulations. Wherever there may be a conflict with other City ordinances relating to erosion control, storm water management or site drainage, the more restrictive provision shall apply, as determined by the Designated City Representative.

**(b) Declaration of severability.** The several sections, subsections and paragraphs of this Ordinance are hereby declared to be severable. If any section, subsection, or paragraph or subparagraph of this Ordinance shall be declared by a decision of a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the other provisions of the Ordinance, or of the section of which the invalid portion or paragraph may be a part.

## **Sec.16. Definitions**

**(a) “Applicable review authorities”** means the City Clerk, Building Inspector, Director of Public Works, Designated City Representative(s) and Planning Commission, depending on the type of project and its location.

**(b) “Applicant”** means any person or entity holding fee title to the property or their representative. The applicant shall become the “permit holder” once a permit is issued. The applicant shall sign the initial permit application form in accordance with subs. 1 through 5 below, after which the applicant may provide the Designated City Representative written authorization for others to serve as the applicant’s representative:

1. In the case of a corporation, by a principal executive officer of at least the level of vice president or by the officer’s authorized representative having overall responsibility for the operation of the site for which a permit is sought.
2. In the case of a limited liability company, by a member or manager.
3. In the case of a partnership, by the general partner.
4. In the case of a sole proprietorship, by the proprietor.
5. For a unit of government, by a principal executive officer, ranking elected official or other duly authorized representative.

Formatted: Indent: First line: 0",  
Numbered + Level: 1 + Numbering  
Style: a, b, c, ... + Start at: 1 +  
Alignment: Left + Aligned at: 0.25"  
+ Tab after: 0.25" + Indent at: 0",  
Tabs: 0", List tab + Not at 0.25"

- (c) **"Best management practice" (or "BMP")** means structural and non-structural measures, practices, techniques or devices employed to avoid or minimize sediment or other pollutants carried in runoff.
- (d) **"Business day"** see "Working Day".
- (e) **"Common plan of development"** means all lands included within the boundary of a certified survey map or subdivision plat created for the purpose of development or sale of property where integrated, multiple, separate and distinct land developing activity may take place at different times by future owners.
- (f) **"City mapping standards"** means that the maps are drawn to specifications of the City of Amery Standards, if and when adopted.
- (g) **"County mapping standards"** means that the maps are drawn to specifications of the Polk County Automated Land Information Standards, Manual of Standards and Procedures.
- (h) **"CSM"** means Certified Survey Map.
- (i) **"Design storm"** means a hypothetical storm event of a depth of rainfall that would occur for the stated return frequency (i.e. once every 2 years or 10 years), duration (i.e 24-hours) and timing of distribution (i.e. type II). All values are based on the historical rainfall records for the area. Design storms used in this ordinance are summarized in Sec. 11(a).
- (j) **"Designated City Representative"** means a designated entity, which may be an individual, a firm or a department to complete each of the following tasks:
  1. Administer the ordinance.
  2. Review applications and approve or deny permits.
  3. Enforce the ordinance.

Each of the three tasks will have an entity that is designated by the City Council by a majority vote and may be changed by the City Council by resolution. A single entity may be designated by the City Council to have one or more of the tasks. When referenced within this ordinance it refers to that entity charged with the section appropriate task or tasks, which may be that is refers to more than one entity.

- (k) **"Dewatering"** means the removal of trapped water from a construction site to allow land development or utility installation activities to occur.
- (l) **"DNR"** means Department of Natural Resources.
- (m) **"Erosion"** means the process of detachment, transport and deposition of soil, sediment or rock fragments by action of water, wind, ice or gravity.
- (n) **"Effective infiltration area"** means the area of the infiltration system that is used exclusively to infiltrate runoff and does not include the area used for site access, berms or pretreatment.
- (o) **"Environmental corridor (primary and secondary)"** means a composite of the best individual elements of the natural resource base including surface water, streams, and rivers and their associated floodlands and shorelands; woodlands, wetlands and wildlife habitat; areas of ground water discharge and recharge; organic soils, rugged terrain and high relief topography; and significant geological formations and physiographic features.
- (p) **"Environmentally sensitive area"** means any area that, due to the natural resources present or the lack of filtering capacity, is more susceptible to the

**Formatted:** Indent: First line: 0",  
 Numbered + Level: 1 + Numbering  
 Style: a, b, c, ... + Start at: 1 +  
 Alignment: Left + Aligned at: 0.25"  
 + Tab after: 0.25" + Indent at: 0",  
 Tabs: 0", List tab + Not at 0.25"

adverse impacts of sediment and other pollutants associated with erosion and urban runoff. Examples include environmental corridors, direct hydrologic connections to lakes, streams, wetlands, groundwater or other water resources, or very coarse or shallow soils above groundwater or bedrock.

- | (q) **“Escrow”** means a sum of money paid by the applicant for the purpose of recouping the expenses incurred by the City in administering this Chapter, reviewing submittals and enforcement of this Chapter, where monies not used for this purpose will be returned to the applicant or where the expenses exceed the paid monies the applicant will owe the City the difference.
- | (r) **“Fee”** means a sum of money paid by the applicant for the purpose of recouping the expenses incurred by the City in administering this Chapter, reviewing submittals and enforcement of this Chapter.
- | (s) **“Filtering layer”** means soil that has at least a 3-foot deep layer with at least 20% that passes through a #200 sieve (fines); or at least a 5-foot deep layer with at least 10% that passes through a #200 sieve (fines); or another medium exists with an equivalent level of protection, as determined by the Designated City Representative.
- | (t) **“Financial Assurance”** means a performance bond, maintenance bond, surety bond, irrevocable letter of credit, or similar guarantees submitted to the City of Amery by the applicant to assure that requirements of the ordinance are carried out in compliance with the storm water permit.
- | (u) **“Final plat”** means a map of a proposed condominium or subdivision to be recorded with the Polk County Register of Deeds pursuant to Wisconsin Statutes.
- | (v) **“GIS system of Polk County”** means the computerized mapping system that Polk County makes available to the general public over the Internet.
- | (w) **“Groundwater recharge areas”** means lands identified as groundwater recharge areas; or where, prior to any land disturbing or land development activity, precipitation or runoff could only leave the area by infiltrating the ground, thereby recharging the groundwater.
- | (x) **“Illicit connection”** means any drain or conveyance, whether on the surface or subsurface, which allows an illegal non-storm water discharge to enter the storm drain system, including but not limited to: sewage, process wastewater and wash water, any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been allowed, permitted, or approved by a government agency, prior to the adoption of this ordinance.
- | (y) **“Impervious surface”** means an area that releases all or a large portion of the precipitation that falls on it, except for frozen soil. Conventional rooftops and asphalt or concrete sidewalks, driveways, parking lots and streets are typical examples of impervious surfaces. For purposes of this ordinance, typical gravel driveways and other examples listed shall be considered impervious unless specifically designed to encourage infiltration or storage of runoff.
- | (z) **“Impracticable”** means that complying with a specific requirement would cause undue economic hardship and that special conditions exist that are beyond the control of the applicant and would prevent compliance.

| (aa) **"Infiltration"** means the entry of precipitation or runoff into or through the soil.

| (bb) **"Infiltration system(s)"** means a device or practice such as a basin, trench, rain garden or swale designed specifically to encourage infiltration, but does not include natural infiltration in pervious surfaces such as lawns, redirecting of rooftop downspouts onto lawns or minimal infiltration from practices, such as swales or road side channels designed for conveyance and pollutant removal only.

| (cc) **"Karst features"** means an area or geologic feature subject to bedrock dissolution so that it is likely to provide a conduit to groundwater, and may include caves, enlarged fractures, mine features, exposed bedrock surfaces, sinkholes, springs, seeps or swallets.

| (dd) **"Land development activity" or "land development"** means any construction related activity that may ultimately result in the addition of impervious surfaces, such as the construction of buildings, roads, parking lots and other structures.

| (ee) **"Land disturbing activity" (or "disturbance")** means any man-made alteration of the land surface that may result in a change in the topography or existing vegetative or non-vegetative soil cover, or may expose soil and lead to an increase in soil erosion and movement of sediment. Land disturbing activity includes clearing and grubbing for future land development, excavating, filling, grading, building construction or demolition, and pit trench dewatering.

| (ff) **"Mannings Equation"** is used for analyzing open channel water flows. This means that the water is open to the atmosphere so it is not flowing under pressure as in ditches, culverts, and storm sewers. The mathematical equation is:

$$V = [1.486/n] R^{2/3} S^{1/2}$$

Where,

V = velocity in feet per second

n = roughness coefficient, indicates resistance to flow

R = hydraulic radius, calculated as area in square feet

S = slope of the energy grade

| (gg) **"Maximum Extent Practicable or MEP"** means a level of implementing best management practices to achieve a level of compliance with the performance standards that has been approved by the Designated City Representative. In determining when MEP has been achieved, the Designated City Representative shall take into account the best available technology, cost effectiveness and other competing issues such as human safety and welfare, endangered and threatened resources, historic properties and geographic features. MEP allows flexibility in the way to meet the performance standards and may vary based on the performance standard and site conditions.

| (hh) **"Navigable"** means all lakes, ponds, flowages, rivers and streams in Amery shall be presumed to be navigable if they are listed in the Wisconsin Department of Natural Resources' publication Surface Waters Resources of Amery, or are shown on the United States Geological Survey Quadrangle Maps. Lakes, ponds, flowages, rivers and streams not included in these documents

-----> **Formatted:** Indent: First line: 0",  
Numbered + Level: 1 + Numbering  
Style: a, b, c, ... + Start at: 1 +  
Alignment: Left + Aligned at: 0.25"  
+ Tab after: 0.25" + Indent at: 0",  
Tabs: 0", List tab + Not at 0.25"

may also be determined to be navigable. Also, Lake Superior, Lake Michigan, all natural inland lakes within Wisconsin and all streams, ponds, sloughs, flowages and other waters within the territorial limits of this State, including the Wisconsin portion of boundary waters, which are navigable under the laws of this State. Under Section 281.31(2)(d), Wisconsin Statutes, notwithstanding any other provision of law or administrative rule promulgated there under, shoreland ordinances required under Section 59.692, Wisconsin Statutes, and Chapter NR 115, Wisconsin Administrative Code do not apply to lands adjacent to farm drainage ditches if:

1. Such lands are not adjacent to a natural navigable stream or river;
2. The drainage ditch was not a navigable stream before ditching; and such lands are maintained in agricultural use.

(ii) **"No Net Increase"** means no more runoff may leave the site after development, as did before development.

(jj) **"NRCS"** means Natural Resources Conservation Service.

(kk) **"Off-site BMP"** means best management practice(s) that are located outside of the boundaries of the site covered by a permit application. Off-site BMPs are usually installed as part of a regional storm water management plan approved by a local government.

(ll) **"Ordinary high water mark (OHWM)"** means the point on the bank or shore up to which the presence and action of surface water is so continuous as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristics.

(mm) **"P8 - Urban Catchment Model"** means a program for predicting polluting particle passage thru pits, puddles, & ponds; prepared for IEP, Inc. & Narragansett Bay Project USEPA/RIDEM by William W. Walker, Jr.

(nn) **"Planned land use"** means the land use designated in the latest version of the Amery land use plan or other document used by the City or Designated City Representative.

(oo) **"Plat"** means a map of a proposed condominium or subdivision.

(pp) **"Pollutant"**, as per s. 283.01(13) Wisconsin Statutes, means any dredged spoil, solid waste, incinerator residue, sewage, garbage, refuse, oil, sewage sludge, munitions, chemical wastes, biological materials, radioactive substance, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water.

(qq) **"Pollution"**, as per s. 283.01(10) Wisc. Statutes, means man-made or man-induced alteration of the chemical, physical, biological or radiological integrity of water.

(rr) **"Preliminary plat"** means a map showing the salient features of a proposed condominium or subdivision submitted to an approving authority for purposes of preliminary consideration.

(ss) **"Preventive action limit"**, as per s. NR 140.05(17), Wis. Admin. Code, means a numerical value expressing the concentration of a substance in groundwater which is adopted under s. 160.15, Stats., and s. NR 140.10, 140.12 or 140.20.

- | (tt) **"Publicly funded"** means a land development, such as a public road or municipal building, which is being funded solely by a unit of government. It does not include new roads or other structures built with private funds, or a combination of public and private funds, and subsequently dedicated to a unit of government.
- | (uu) **"Redevelopment"** means land development that replaces previous land development of similar impervious conditions.
- | (vv) **"Regulatory agency"** means a public agency that the Designated City Representative recognizes as having the legal authority to review and approve erosion control and storm water management plans and enforce their implementation, with requirements at least as restrictive as this ordinance.
- | (ww) **"Responsible party"** means any person or entity holding fee title to the property or acting as the owners representative, including any person, firm, corporation or other entity performing services, contracted, subcontracted or obligated by other agreement to design, implement, inspect, verify or maintain the BMPs and other approved elements of erosion control and storm water plans and permits under this ordinance.
- | (xx) **"Road"** as used in Sec. 6 of this ordinance, means any access drive that serves more than two (2) residences or businesses.
- | (yy) **"Runoff"** means water from rain, snow or ice melt, or dewatering that moves over the land surface via sheet or channelized flow.
- | (zz) **"Shoreland"** means the area landward of the ordinary high water mark within the following distances: 1,000 feet from a lake, pond or flowage; and 300 feet from a river or stream or to the landward side of the floodplain, whichever distance is greater.
- | (aaa) **"Shoreland Management Area"** means the area landward of the ordinary high water mark within the following distances: 1,000 feet from a lake, pond or flowage; and 300 feet from a river or stream or to the landward side of the floodplain, whichever distance is greater, or other area set forth by ordinance or policy.
- | (bbb) **"Site"** means the entire area included in the legal description of which the land disturbing or land development activity will occur.
- | (ccc) **"Stabilized"** means that all land disturbing activities are completed and that a uniform, perennial vegetative cover has been established on at least 70% of the soil surface or other surfacing material is in place and the risk of further soil erosion is minimal, as determined by the Designated City Representative.
- | (ddd) **"Storm drainage system"** means a publicly-owned facility by which storm water is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.
- | (eee) **"Storm water"** means the same as "Runoff."
- | (fff) **"Storm water BMP"** means any best management practice that is designed to collect or manage the quantity or quality of storm water runoff for an indefinite time period and is incorporated into an approved storm water management plan to meet the requirements of this ordinance. This term is a

subset of the term “best management practice” and distinct in that the BMPs require long-term maintenance. Some examples include, but are not limited to wet or dry detention basin, infiltration trench or basin, bio-retention basin, stilling basin, green roof, filter strip, artificial wetland, rain garden or any combination of these or other permanent storm water management practices, as determined by the Designated City Representative.

| **(ggg) “Storm Water Committee”** means committee made up of members appointed and approved by the City Council, and shall be a minimum of three members with a minimum of one member from the Apple River Protection District Board and one member from the Amery Lake Protection and Rehabilitation District Board.

| **(hhh) “Storm water permit”** means a written authorization made by the Designated City Representative to the applicant to conduct land disturbing or land development activities in accordance with the requirements of this ordinance. A storm water permit regulates both construction site erosion and post-construction storm water runoff from a site.

| **(iii) “Subdivision”** means a division of a lot, parcel or tract of land by the owner thereof or the owner’s agent for the purpose of sale or of building development that meets the subdivision definition criteria under s. 236.03(12) Wisconsin Statutes or a more restrictive definition adopted by a local unit of government.

| **(jjj) “TR-55”** means the United States Department of Agriculture, Natural Resources Conservation Service (previously Soil Conservation Service), Urban Hydrology for Small Watersheds, Second Edition, Technical Release 55, June 1986.

| **(kkk) “Technical standard”** means a document that specifies design, predicted performance and operation and maintenance requirements for a material, device or method.

| **(lll) “Top of channel”** means an edge, or point on the landscape, commencing landward from the ordinary high-water mark of a surface water of the state, where the slope of the land begins to be less than 12% continually for at least 50 feet. If the slope of the land is 12% or less continually for the initial 50 feet, landward from the ordinary high-water mark, the top of the channel is the ordinary high-water mark.

| **(mmm) “Type II distribution”** means a rainfall type curve as established in the United States Department of Agriculture, Soil Conservation Service, Technical Paper 149, published 1973. The Type II curve is applicable to all of Wisconsin and represents the most intense storm pattern.

| **(nnn) “Unnecessary Hardship”** means present only where, in the absence of a variance, no reasonable use can be made of the property.

| **(ooo) “Utility”** means a wire, pipe, tube or other conduit designed to distribute or collect a product or service, including but not limited to electricity, natural gas, oil, telecommunications, drinking water, storm water, sewage, or any combination of these items.

| **(ppp) “Warm season and wetland plantings”** means seed or plant stock that are native to a prairie or wetland setting. These types of plantings usually take a couple of years to get established and require diligent removal of invasive

species during this time. Upon maturity, warm season plants generally have a deep root system, which enhances infiltration.

(qqq) **"Waters of the state"**, as per s. 281.01 (18), Wisconsin Statutes, includes all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, watercourses, drainage systems and other surface water or groundwater, natural or artificial, public or private, within this state or its jurisdiction.

(rrr) **"Wetlands"** means an area where water is at, near or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions

(sss) **"Woodland"** means an area where a grouping of 10 or more trees exist that have trunk diameters of at least 4 inches at four feet above the ground surface. The boundaries of a woodland shall be defined by the canopy, commonly referred to as the "drip line".

(ttt) **"Working day"** means any day that the Designated City Representative(s) routinely and customarily are open for business, and does not include Saturday, Sunday and any official City holidays.

(uuu) **"WPDES stormwater discharge permit"** means a permit issued by the Wisconsin Department of Natural Resources under Section 283.31 Wis. Stats., Administrative Codes NR 216 and NR 151, which authorizes the discharge of stormwater from construction sites, industrial facilities and selected municipalities to waters of the state.

## **APPENDIX X**

### **Rain Garden Design**

Assess the site and determine if the runoff from impervious areas will go one or more directions.

For each direction impervious surface runoff will travel, calculate the total impervious area in square feet, then multiply by the appropriate factor found in Table 1, based on soil and slope, to get the square footage of rain garden required.

Runoff from impervious surfaces must be piped or channeled to the rain gardens.

**Table 1**

| Slope               | 0-4%     | 5-7%          | 8-12%       |
|---------------------|----------|---------------|-------------|
| Depth               | 3-5 inch | 6-7 inch deep | 8 inch deep |
| Silty or sandy soil | 0.34     | 0.25          | 0.16        |
| Clayey soil         | 0.43     | 0.32          | 0.2         |

Examples of rain garden layout and plant lists: ((copy out of "Rain Gardens, a how-to manual for homeowners")) – available from DNR Service Centers, Publication PUB-WT-776 2003 and from county UW Extension offices, Publication GWQ037, R-06-03-5M-100-S.

**Effective date.** Following passage and publication by the City Council, this Ordinance shall be in full force and effect in all areas described in Section 5, but in no event earlier than \_\_\_\_\_ 2, 2009.

**Adoption.** Passed and approved by the City Council of Amery, Wisconsin, this \_\_\_\_\_ day of \_\_\_\_\_, 2008.

### **Approved as to form:**

Date Submitted to City Council: \_\_\_\_\_, 2008

City Council Action: Adopted

| SUBMITTED BY:

Passed this day Wednesday October 1, 2008

This amendment shall take effect upon passage and publication as required by law.

\_\_\_\_\_  
Harvey Stower, Mayor

Attest:

\_\_\_\_\_  
Darcy D. Long, City Administrator



**Schedule "A"**  
**STORM WATER MANAGEMENT & EROSION CONTROL**  
**PLAN REVIEW FEES – 2006 (without DNR fees)**  
**City of Amery**

| <b>PROJECTS</b>  | <b>FEE/ESCROW</b>   |
|--|---|
| REVIEW FEE<br>Miscellaneous Grading/filling or Building Projects:<br><ul style="list-style-type: none"> <li>⌚ Individual home construction (1-2 family)</li> <li>⌚ Access roads to minor land divisions</li> <li>⌚ Accessory buildings &amp; other structures</li> <li>⌚ Ponds</li> <li>⌚ Misc. grading/filling or referrals from the zoning Dept. or the town that are not covered below</li> </ul> | \$150.00/\$500.00   |
| Multi-Family Residences (3 or more family units)   | \$500.00/\$1,000.00   |
| Subdivision Plats or 1-2 Family Condominium Units  | \$800.00 + \$25.00 per lot/unit/\$2,000.00  |
| Commercial, Retail, Industrial & Manufacturing Buildings/Developments (includes Storage units)   | \$800.00 + \$50.00 per acre > 2 acres/\$2,000.00  |
| Golf Courses   | \$800.00/\$2,000.00   |
| Utilities (> 300 lineal feet)  | \$.10 per foot – (Exempt if plowed or bored in <b>and</b> not in channel flow)/\$1,000.00 |

**Additional Fees:**

- ⌚ Projects subject to a permit that begin land disturbing or land development activities prior to obtaining a permit shall be charged double the above noted fees.
- ⌚ Projects that submit incomplete plans without addressing issues in previous review letters shall be charged an additional \$150.00 per review. This fee may also be applied to miscellaneous projects where the Designed City Representative provides technical design or GIS services.

**FINANCIAL GUARANTEE**

A financial guarantee is also required as a condition of obtaining an erosion control and storm water management permit\*. It is returned to the applicant upon satisfying all permit conditions, including: 1) submitting "as-built" survey of final construction; 2) certification of as-built construction by a licensed engineer; and 3) final inspection from the Designative City Representative (verify stabilization, etc.). The amount required as a financial guarantee includes:

- ⌚ \$5,000 cash for each planned storm water facility on the site,
- ⌚ \$1,000 to \$5,000 cash for sites that have no planned storm water facility, or the facility is not regulated by Amery, depending on the scope of the project.
- ⌚ Letter of credit for double the above noted amounts, following standard City terms.

\* **Note:** Single-family home erosion control permits are exempt from the financial guarantee requirement.



## APPENDIX X

### Rain Garden Design

Assess the site and determine if the runoff from impervious areas will go one or more directions.

For each direction impervious surface runoff will travel, calculate the total impervious area in square feet, then multiply by the appropriate factor found in Table 1, based on soil and slope, to get the square footage of rain garden required.

Runoff from impervious surfaces must be piped or channeled to the rain gardens.

**Table 1**

|                     |          |               |             |
|---------------------|----------|---------------|-------------|
| Slope               | 0-4%     | 5-7%          | 8-12%       |
| Depth               | 3-5 inch | 6-7 inch deep | 8 inch deep |
| Silty or sandy soil | 0.34     | 0.25          | 0.16        |
| Clayey soil         | 0.43     | 0.32          | 0.2         |

Examples of rain garden layout and plant lists: ((copy out of "Rain Gardens, a how-to manual for homeowners")) – available from DNR Service Centers, Publication PUB-WT-776 2003 and from county UW Extension offices, Publication GWQ037, R-06-03-5M-100-S.

**Effective date.** Following passage and publication by the City Council, this Ordinance shall be in full force and effect in all areas described in Section 5, but in no event earlier than June 2, 2009.

**Adoption.** Passed and approved by the City Council of Amery, Wisconsin, this 1 day of October, 2008.

**Approved as to form:**

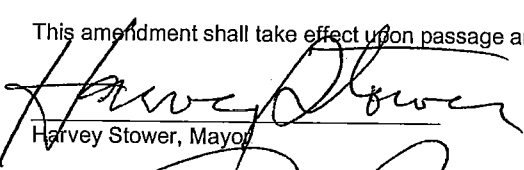
Date Submitted to City Council: October 1, 2008

City Council Action: Adopted

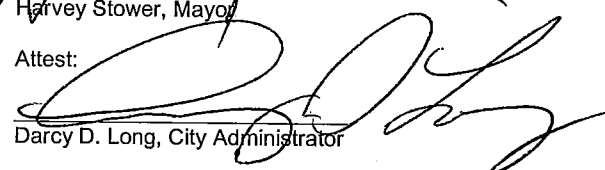
| SUBMITTED BY: David Myers.

Passed this day Wednesday October 1, 2008

This amendment shall take effect upon passage and publication as required by law.

  
Harvey Stower, Mayor

Attest:

  
Darcy D. Long, City Administrator

